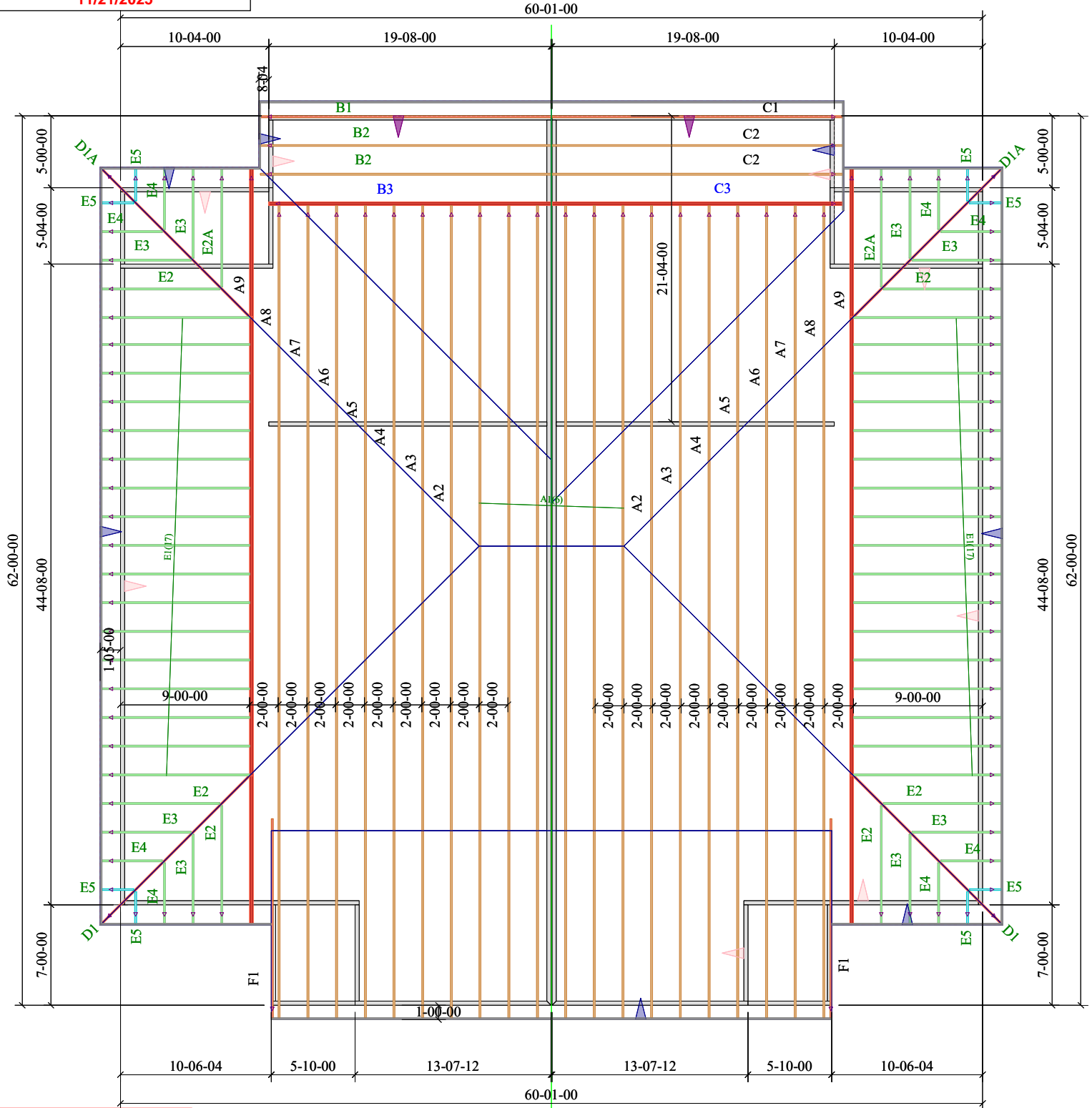


**RELEASED FOR
CONSTRUCTION**
As Noted on Plans Review

Development Services Department
Lee's Summit, Missouri
11/21/2025

ROOF PITCH IS 2/12 AND 4/12 WITH VARYING SOFFIT WIDTHS.

ALL WALLS ARE 9-1-2



STAND STRUCTURAL ENGINEERING
8234 Robinson St
Overland Park, KS 66204
(913) 214-2169

- Reviewed
- Reviewed as Noted
- Not required by the Contract Documents
- For Record Only
- Revise and Resubmit
- Rejected

Review is only for general conformance with the design concept and the intent of the Contract Documents. Contractor is solely responsible for verifying dimensions, for establishing fabrication processes, means, techniques, sequences and procedures of construction and for coordination of work of all trades. Review action taken and noted to information shown does not authorize deviations from the intent of the contract documents, unless so stated in a separate letter or Change Order. The Structural Engineer and/or Architect-of-Record retained by the Contractor or his Supplier, for the Design / Build portion of the project represented by this submittal, is solely responsible for the correctness, appropriateness and adequacy of the Design / Build system.

By: JFunk
Date: 11/20/2025

ARTLAND TRUSS, LLC.
00 MID AMERICA DR.
ATTSBURG, MO. 64477

P: 816-930-3177

Y: JOHN FITZGERALD

**84 LUMBER / REUNION AT BLACKWELL
BUILDING B2 / DUPLEX
SE SHENANDOAH DR.
LEE'S SUMMIT, MO.**

JOB # 250001 ROOF LAYOUT

DATE; 11/19/2024

MiTek, Inc.
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Re: 250001

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Heartland Truss, Inc..

Pages or sheets covered by this seal: I70282510 thru I70282534

My license renewal date for the state of Missouri is December 31, 2025.

Missouri COA: Engineering 001193

**RELEASED FOR
CONSTRUCTION**
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
11/21/2025



STAND STRUCTURAL ENGINEERING
8234 Robinson St
Overland Park, KS 66204
(913) 214-2169

Reviewed Revise and Resubmit
 Reviewed as Noted Rejected
 Not required by the Contract Documents
 For Record Only

Review is only for general conformance with the design concept and the intent of the Contract Documents. Contractor is solely responsible for verifying dimensions, for establishing fabrication processes, means, techniques, sequences and procedures of construction and for coordination of work of all trades. Review action taken and noted to information shown does not authorize deviations from the intent of the contract documents, unless so stated in a separate letter or Change Order. The Structural Engineer and/or Architect-of-Record retained by the Contractor or his Supplier, for the Design / Build portion of the project represented by this submittal, is solely responsible for the correctness, appropriateness and adequacy of the Design / Build system.

By: JFunk
Date: 11/20/2025

December 19, 2024

Sevier, Scott, Engineer

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

Job 250001	Truss A1	Truss Type Roof Special	Qty 6	Ply 1	170282510
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Heartland Truss, Inc. Plattsburg, MO - 64477,

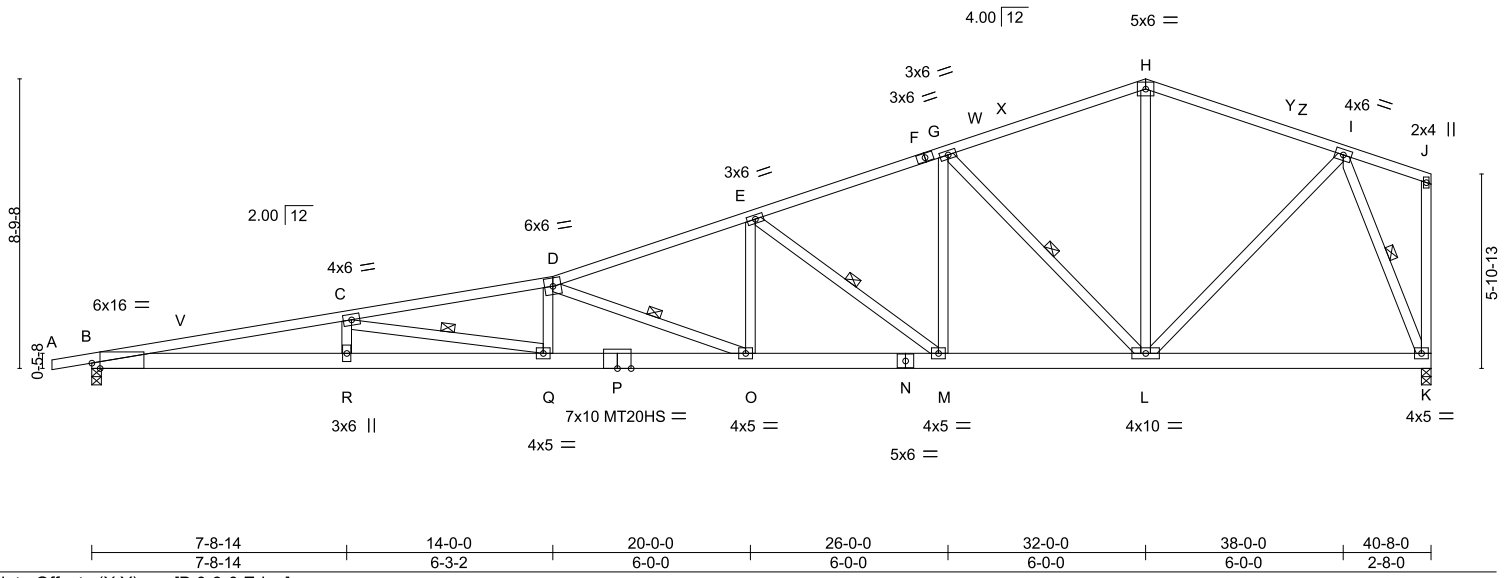
8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:12 2024 Page 1

ID: rYBbgu44XWjWhpc7z8PG5uyI09_wB3E5KmRoHtwpjN40d4ba1qGuwXyoJse8rYCuky8?DL

Job Reference (optional)

1-2-8	7-8-14	14-0-0	20-0-0	26-0-0	32-0-0	38-0-0	40-8-0
1-2-8	7-8-14	6-3-2	6-0-0	6-0-0	6-0-0	6-0-0	2-8-0

Scale = 1:70.0



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.94 BC 0.85 WB 0.78	in (loc) l/def L/d Vert(LL) -0.60 Q-R >816 360 Vert(CT) -1.11 Q-R >438 240 Horz(CT) 0.14 K n/a n/a Wind(LL) 0.48 Q-R >999 240	MT20 MT20HS	244/190 187/143
TCDL 10.0	Rep Stress Incr YES	Matrix-MS		Weight: 262 lb	FT = 20%
BCLL 10.0	Code IBC2018/TPI2014				
BCDL 10.0					

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2 *Except* A-D: 2x4 SP 2400F 2.0E, D-F: 2x4 SP 1650F 1.5E	TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD 2x6 SP 2400F 2.0E *Except* N-P: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 7-7-1 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt C-Q, D-O, E-M, G-L, I-K


REACTIONS. (size) B=0-3-8, K=0-3-8
 Max Horz B=197(LC 11)
 Max Uplift B=-327(LC 8), K=-221(LC 8)
 Max Grav B=1807(LC 3), K=1721(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-7887/1267, C-D=-6830/1122, D-E=-4372/776, E-G=-2854/584, G-H=-1602/422,
 H-I=-1552/422
 BOT CHORD B-R=-1314/7755, Q-R=-1311/7759, O-Q=-1090/6683, M-O=-646/4107, L-M=-370/2668,
 K-L=-125/627
 WEBS C-Q=-1451/236, D-Q=0/563, D-O=-2777/479, E-O=-107/1266, E-M=-1801/345,
 G-M=-143/1258, G-L=-1755/359, H-L=-67/682, I-L=-132/1236, I-K=-1691/346

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 2-10-5, Interior(1) 2-10-5 to 27-11-3, Exterior(2R) 27-11-3 to 36-0-13, Interior(1) 36-0-13 to 36-5-7, Exterior(2E) 36-5-7 to 40-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 5) All plates are MT20 plates unless otherwise indicated.
 - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 327 lb uplift at joint B and 221 lb uplift at joint K.
 - 8) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.



December 19, 2024

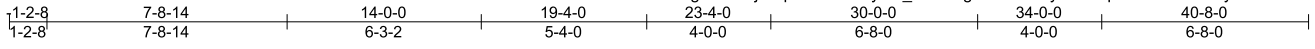
<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcsccomponents.com)</p>	 <p>16023 Swingley Ridge Rd. Chesterfield, MO 63017 314.434.1200 / MiTek-US.com</p>
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Job	Truss	Truss Type	Qty	Ply	170282511
250001	A2	Hip	2	1	

Heartland Truss, Inc. Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:13 2024 Page 1

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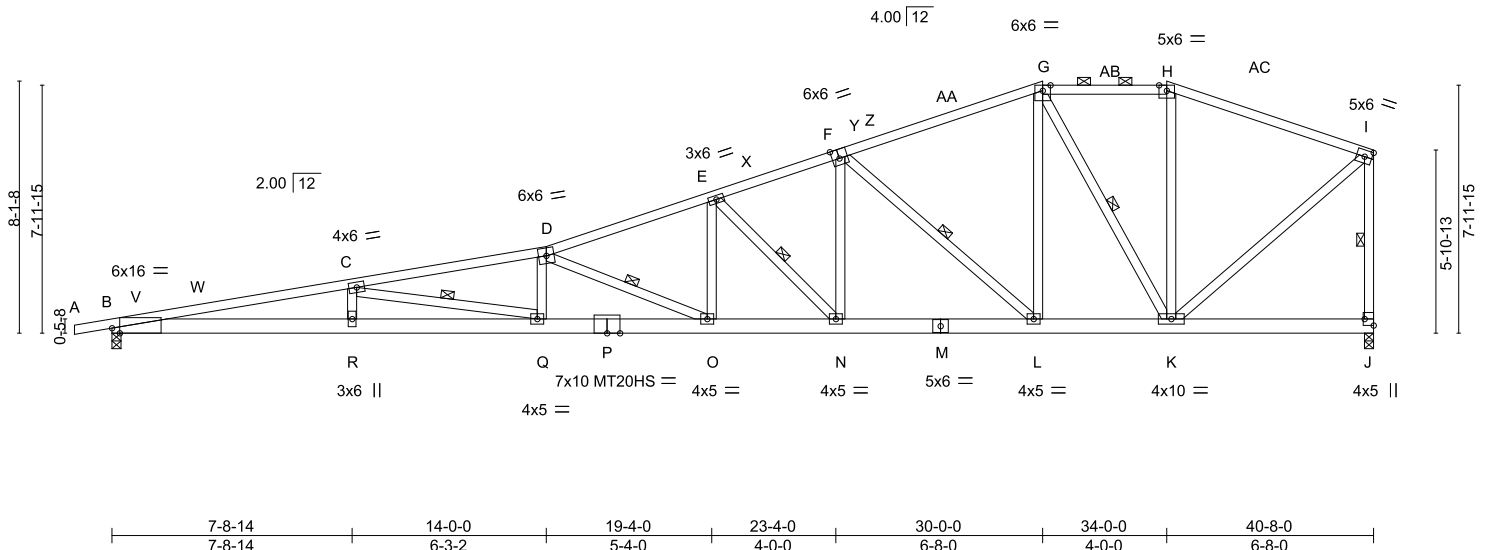


Plate Offsets (X,Y)--	[B:0-3-0,Edge], [F:0-2-12,Edge], [J:Edge,0-3-8]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.95 BC 0.90 WB 0.79	in (loc) l/defl L/d Vert(LL) -0.63 Q >769 360 Vert(CT) -1.14 Q-R >425 240 Horz(CT) 0.15 J n/a n/a Wind(LL) 0.49 Q-R >997 240	MT20 244/190 MT20HS 187/143	Weight: 269 lb FT = 20%
TCDL 10.0	Rep Stress Incr YES	Matrix-MS			
BCLL 10.0	Code IBC2018/TPI2014				
BCDL 10.0					

LUMBER-	BRACING-
TOP CHORD 2x4 SP 1650F 1.5E *Except* A-D: 2x4 SP 2400F 2.0E, G-H: 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-6-4 max.): G-H.
BOT CHORD 2x6 SP No.1 *Except* B-P: 2x6 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 7-6-2 oc bracing.
WEBS 2x4 SP No.3 *Except* I-J: 2x4 SP No.2	WEBS 1 Row at midpt C-Q, D-O, E-N, F-L, G-K, I-J


REACTIONS. (size) B=0-3-8, J=0-3-8
 Max Horz B=206(LC 11)
 Max Uplift B=-334(LC 8), J=-239(LC 8)
 Max Grav B=1811(LC 3), J=1996(LC 44)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-7909/1326, C-D=-7228/1188, D-E=-5037/857, E-F=-3778/710, F-G=-2217/509, G-H=-1394/413, H-I=-1544/398, I-J=-1923/398
 BOT CHORD B-R=-1338/7776, Q-R=-1335/7779, O-Q=-1118/7097, N-O=-697/4722, L-N=-493/3566, K-L=-218/2001
 WEBS C-Q=-1444/234, D-Q=0/565, D-O=-2647/462, E-O=-140/1246, E-N=-1671/293, F-N=-141/1384, F-L=-2025/363, G-L=-171/1497, G-K=-1277/229, I-K=-277/1814

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 2-10-5, Interior(1) 2-10-5 to 24-3-0, Exterior(2R) 24-3-0 to 36-5-7, Exterior(2E) 36-5-7 to 40-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 5) Provide adequate drainage to prevent water ponding.
 - 6) All plates are MT20 plates unless otherwise indicated.
 - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 334 lb uplift at joint B and 239 lb uplift at joint J.
 - 9) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



December 19, 2024

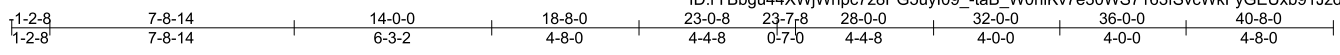
<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcsccomponents.com)</p>	 <p>16023 Swingley Ridge Rd. Chesterfield, MO 63017 314.434.1200 / MiTek-US.com</p>
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Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
250001	A3	Hip	2	1	

170282512

Heartland Truss, Inc. Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:14 2024 Page 1



Scale = 1:73.0

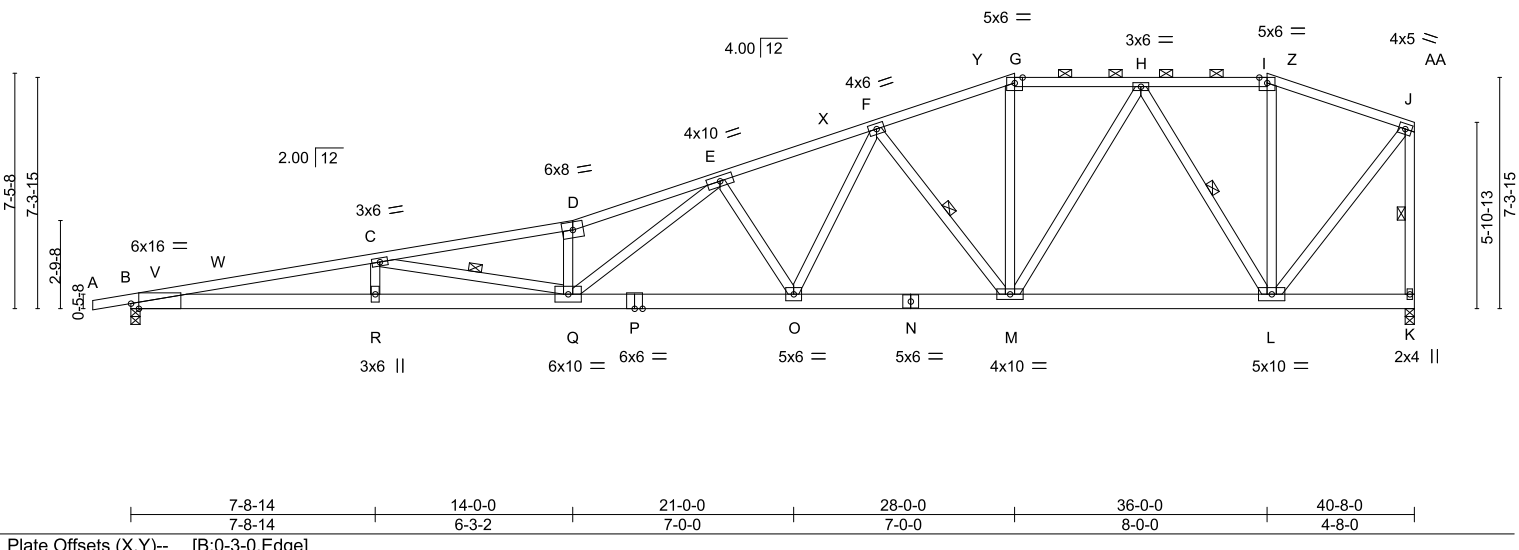


Plate Offsets (X,Y)--	[B:0-3-0,Edge]
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LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	Plate Grip DOL 1.15	TC 0.93	Vert(LL) -0.64	Q	>765	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.69	Vert(CT) -1.18	Q-R	>412	240		
BCLL 10.0	Rep Stress Incr YES	WB 0.71	Horz(CT) 0.13	K	n/a	n/a		
BCDL 10.0	Code IBC2018/TPI2014	Matrix-MS	Wind(LL) 0.53	Q-R	>926	240		
							Weight: 267 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2 *Except* A-D: 2x4 SP 2400F 2.0E, D-G: 2x4 SP 1650F 1.5E	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-9-1 max.); G-I.
BOT CHORD 2x6 SP 2400F 2.0E *Except* N-P: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 8-11-0 oc bracing.
WEBS 2x4 SP No.3 *Except* E-Q: 2x4 SP No.2	WEBS 1 Row at midpt C-Q, F-M, H-L, J-K

REACTIONS. (size) B=0-3-8, K=0-3-8
 Max Horz B=214(LC 11)
 Max Uplift B=-338(LC 8), K=-259(LC 8)
 Max Grav B=1807(LC 3), K=1846(LC 44)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-7894/1367, C-D=-6946/1213, D-E=-7260/1314, E-F=-4282/835, F-G=-2498/590,
 G-H=-2315/582, H-I=-1029/344, I-J=-1133/341, J-K=-1793/395
 BOT CHORD B-R=-1358/7762, Q-R=-1358/7762, O-Q=-765/4740, M-O=-511/3298, L-M=-233/1741
 WEBS C-Q=-1495/254, D-Q=-1384/336, E-Q=-471/2885, E-O=-1457/333, F-O=-233/1667,
 F-M=-1633/341, G-M=-57/566, H-M=-161/1168, H-L=-1406/327, J-L=-286/1647

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 2-10-5, Interior(1) 2-10-5 to 22-3-0, Exterior(2R) 22-3-0 to 36-5-7, Exterior(2E) 36-5-7 to 40-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 5) Provide adequate drainage to prevent water ponding.
 - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 338 lb uplift at joint B and 259 lb uplift at joint K.
 - 8) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



December 19, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)



Job	Truss	Truss Type	Qty	Ply	170282513
250001	A4	Hip	2	1	

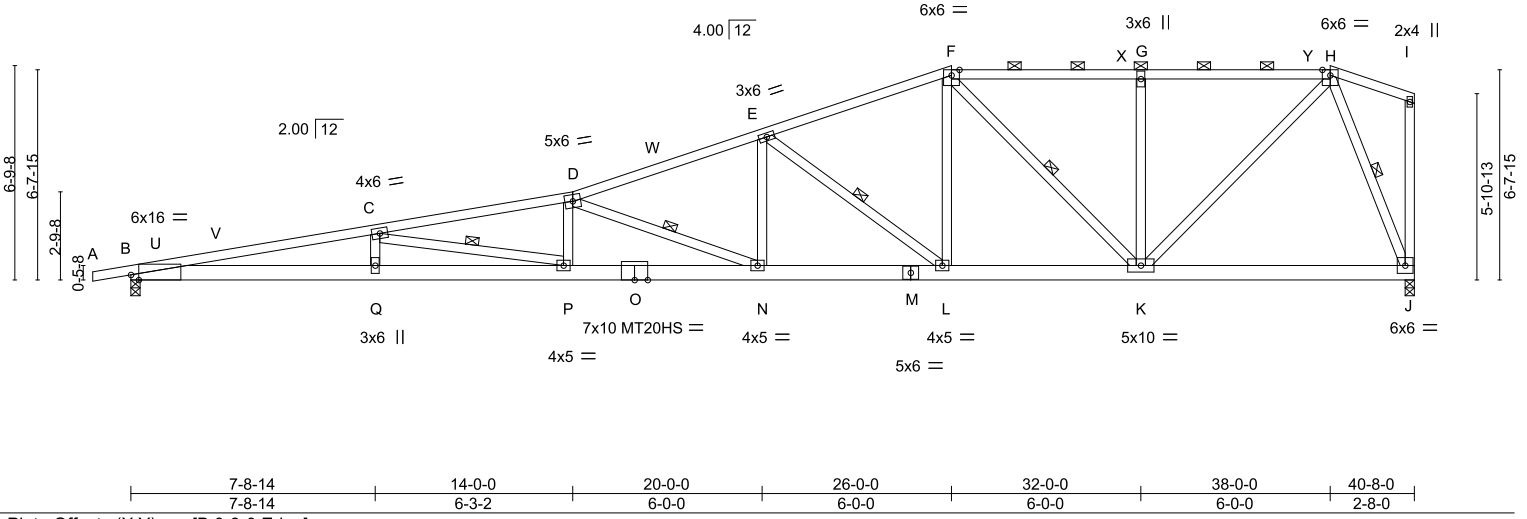
Heartland Truss, Inc. Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:15 2024 Page 1

ID:rYBbgu44XWjWhpc7z8PG5uyI09_-LmlMjMoK5CFVgA5fhldlCfSnL8Yd?gS5qpmV3y8?DI



Scale = 1:73.0



LOADING (psf)	SPACING-	CSL	DEFL.	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	Plate Grip DOL 1.15	TC 0.93	in (loc) l/defl L/d	MT20 244/190	187/143
TCDL 10.0	Lumber DOL 1.15	BC 0.85	Vert(LL) -0.58 P-Q >833 360	MT20HS 187/143	
BCLL 10.0	Rep Stress Incr YES	WB 0.79	Vert(CT) -1.10 P-Q >443 240		
BCDL 10.0	Code IBC2018/TPI2014	Matrix-MS	Horz(CT) 0.14 J n/a n/a		
			Wind(LL) 0.50 P-Q >979 240	Weight: 258 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2 *Except* A-D: 2x4 SP 2400F 2.0E, D-F: 2x4 SP 1650F 1.5E	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-2-12 max.): F-H.
BOT CHORD 2x6 SP 2400F 2.0E *Except* M-O: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 7-2-15 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt C-P, D-N, E-L, F-K, H-J

REACTIONS. (size) B=0-3-8, J=0-3-8
 Max Horz B=222(LC 11)
 Max Uplift B=-342(LC 8), J=-280(LC 8)
 Max Grav B=1792(LC 3), J=1748(LC 43)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-7807/1422, C-D=-6757/1288, D-E=-4480/919, E-F=-2831/687, F-G=-1951/549, G-H=-1952/549
 BOT CHORD B-Q=-1367/7676, P-Q=-1364/7679, N-P=-1195/6632, L-N=-741/4193, K-L=-430/2586, J-K=-140/646
 WEBS C-P=-1452/235, D-P=0/565, D-N=-2747/493, E-N=-111/1248, E-L=-1973/384, F-L=-168/1375, F-K=-1094/215, G-K=-698/242, H-K=-392/1908, H-J=-1726/385

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 2-10-5, Interior(1) 2-10-5 to 20-0-0, Exterior(2R) 20-0-0 to 38-0-0, Exterior(2E) 38-0-0 to 40-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 5) Provide adequate drainage to prevent water ponding.
 - 6) All plates are MT20 plates unless otherwise indicated.
 - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 342 lb uplift at joint B and 280 lb uplift at joint J.
 - 9) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



December 19, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

16023 Swingley Ridge Rd.
 Chesterfield, MO 63017
 314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	170282514
250001	A5	Hip	2	1	

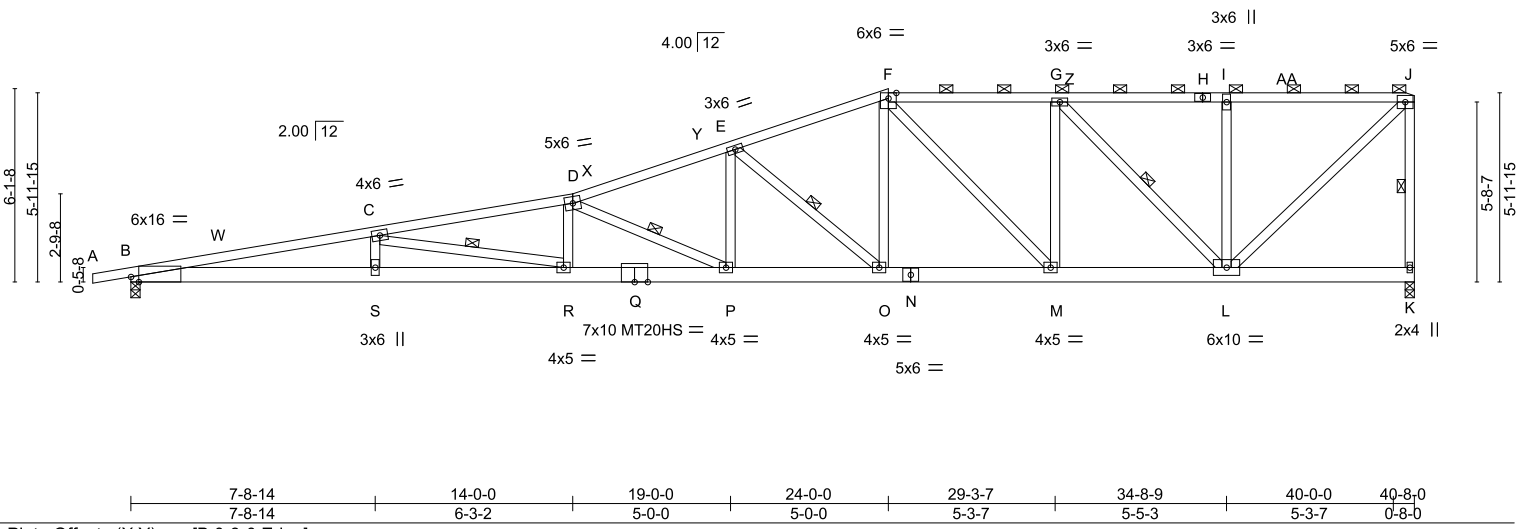
Heartland Truss, Inc. Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:16 2024 Page 1

ID:rYBbgu44XWjWhpc7z8PG5uyI09_pyJlxhpysWNMIKgrFSBXIt_yFXvPk4vE3TWQ1VY8?DH



Scale = 1:73.0



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	2-0-0 Plate Grip DOL 1.15	TC 0.92	in (loc) l/defl L/d	MT20 244/190	
TCDL 10.0	Lumber DOL 1.15	BC 0.82	Vert(LL) -0.57 R-S >849 360	MT20HS 187/143	
BCLL 10.0	Rep Stress Incr YES	WB 0.97	Vert(CT) -1.08 R-S >449 240		
BCDL 10.0	Code IBC2018/TPI2014	Matrix-MS	Horz(CT) 0.14 K n/a n/a		
			Wind(LL) 0.49 R-S >983 240	Weight: 259 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2 *Except* A-D: 2x4 SP 2400F 2.0E	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-10-9 max.): F-J.
BOT CHORD 2x6 SP 2400F 2.0E *Except* N-Q: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 7-3-10 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt C-R, D-P, E-O, G-L, J-K


REACTIONS. (size) B=0-3-8, K=0-3-8
 Max Horz B=233(LC 11)
 Max Uplift B=-344(LC 8), K=-309(LC 8)
 Max Grav B=1787(LC 3), K=1923(LC 39)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-7777/1402, C-D=-6713/1270, D-E=-4570/949, E-F=-3210/737, F-G=-2637/624,
 G-I=-1701/415, I-J=-1701/415, J-K=-1823/373
 BOT CHORD B-S=-1370/7646, R-S=-1367/7649, P-R=-1178/6566, O-P=-776/4288, M-O=-498/2985,
 L-M=-400/2635
 WEBS C-R=-1446/252, D-R=0/561, D-P=-2542/453, E-P=-137/1265, E-O=-1776/357,
 F-O=-172/1338, F-M=-827/155, G-M=-49/790, G-L=-1378/298, I-L=-580/169,
 J-L=-423/2340

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 2-10-5, Interior(1) 2-10-5 to 18-3-0, Exterior(2R) 18-3-0 to 29-9-0, Interior(1) 29-9-0 to 36-5-7, Exterior(2E) 36-5-7 to 40-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 5) Provide adequate drainage to prevent water ponding.
 - 6) All plates are MT20 plates unless otherwise indicated.
 - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 344 lb uplift at joint B and 309 lb uplift at joint K.
 - 9) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



December 19, 2024

<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbccomponents.com)</p>	 <p>16023 Swingley Ridge Rd. Chesterfield, MO 63017 314.434.1200 / MiTek-US.com</p>
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Job	Truss	Truss Type	Qty	Ply	170282515
250001	A6	Half Hip	2	1	

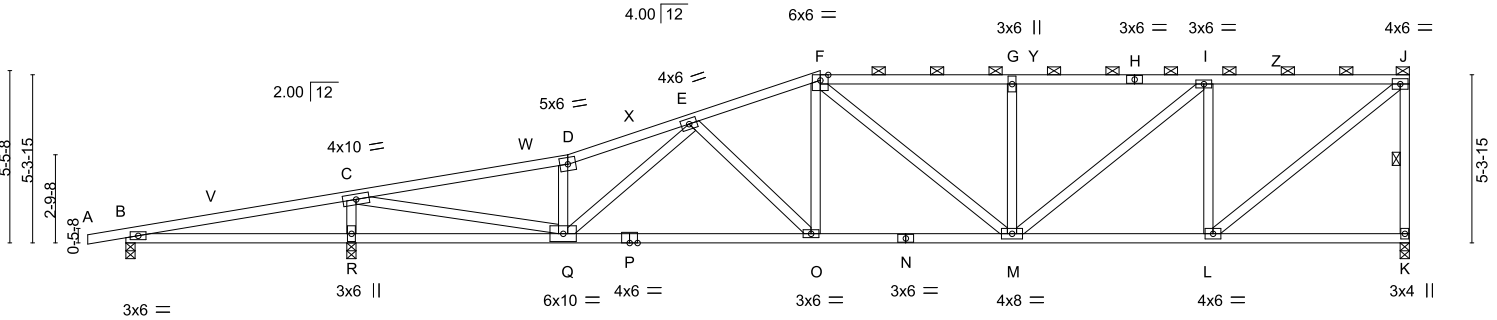
Heartland Truss, Inc. Plattsburg, MO - 64477,

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ID:rYBbgu44XWjWhpc7z8PG5uyI09_-H9t781qadqVDwUF1oAfmH4X66xCBTYCNI7FzZyy8?DG

1-2-8	7-1-12	7-4-10	14-0-0	18-0-0	22-0-0	28-0-15	34-3-9	40-8-0
1-2-8	7-1-12	0-2-14	6-7-6	4-0-0	4-0-0	6-0-15	6-2-11	6-4-7

Scale = 1:73.0



7-1-12	14-0-0	22-0-0	28-0-15	34-3-9	40-8-0
7-1-12	6-10-4	8-0-0	6-0-15	6-2-11	6-4-7

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	2-0-0 Plate Grip DOL 1.15	TC 0.98	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.97	Vert(LL) -0.26 O-Q >999 360		
BCLL 10.0	Rep Stress Incr YES	WB 0.90	Vert(CT) -0.51 O-Q >782 240		
BCDL 10.0	Code IBC2018/TPI2014	Matrix-MS	Horz(CT) 0.06 K n/a n/a		
			Wind(LL) 0.18 O-Q >999 240	Weight: 216 lb	FT = 20%

LUMBER-
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3 *Except*
 C-Q: 2x4 SP No.2

BRACING-
 TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-2-0 max.); F-J.
 BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
 WEBS 1 Row at midpt J-K

REACTIONS. (size) K=0-3-8, B=0-3-8, R=0-3-8
 Max Horz B=207(LC 11)
 Max Uplift K=-247(LC 8), B=-63(LC 8), R=-343(LC 8)
 Max Grav K=1685(LC 33), B=327(LC 36), R=1916(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-184/551, C-D=-2840/566, D-E=-2952/637, E-F=-2505/571, F-G=-2483/548, G-I=-2480/546, I-J=-1720/377, J-K=-1627/302
 BOT CHORD B-R=-526/140, Q-R=-526/140, O-Q=-479/2510, M-O=-363/2363, L-M=-257/1720
 WEBS C-Q=-631/3260, D-Q=-752/225, E-Q=-56/477, E-O=-568/166, F-O=-30/625, F-M=-284/242, G-M=-644/194, I-M=-218/984, I-L=-1237/296, J-L=-351/2177, C-R=-1608/425

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 2-10-5, Interior(1) 2-10-5 to 16-3-0, Exterior(2R) 16-3-0 to 27-9-0, Interior(1) 27-9-0 to 36-5-7, Exterior(2E) 36-5-7 to 40-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 5) Provide adequate drainage to prevent water ponding.
 - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 247 lb uplift at joint K, 63 lb uplift at joint B and 343 lb uplift at joint R.
 - 8) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



December 19, 2024

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MiTek®

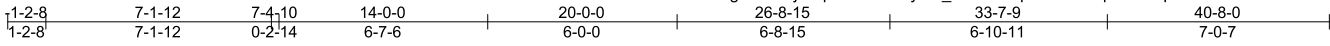
16023 Swingley Ridge Rd.
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Job	Truss	Truss Type	Qty	Ply	170282516
250001	A7	Half Hip	2	1	

Heartland Truss, Inc. Plattsburg, MO - 64477,

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Scale = 1:73.0

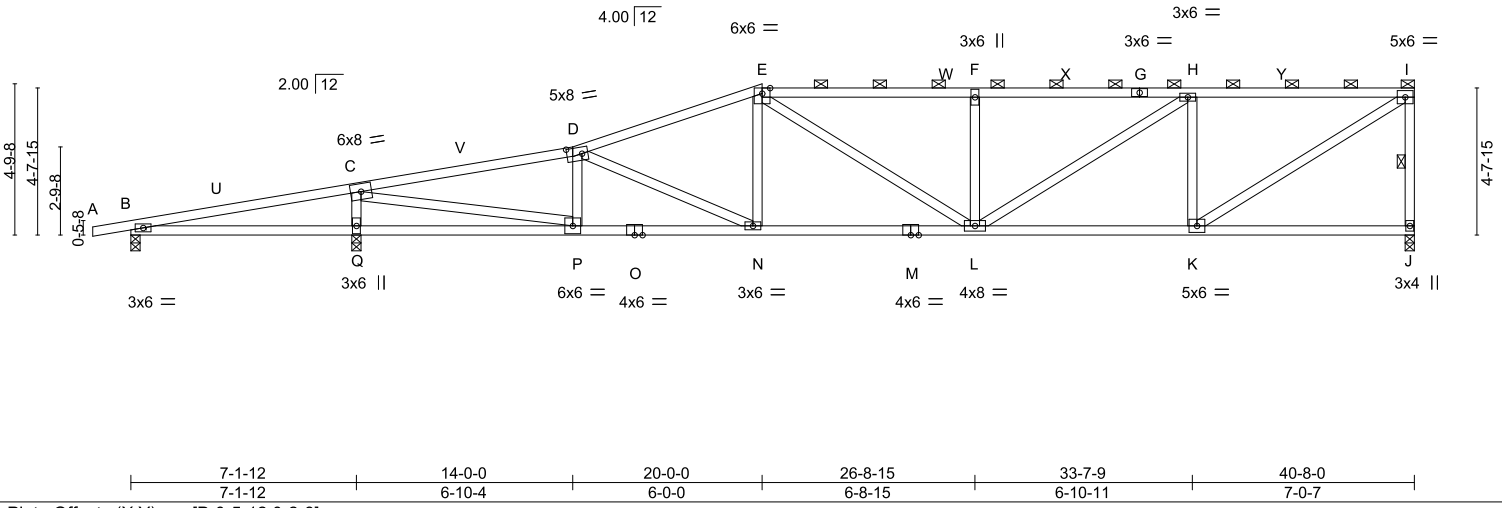


Plate Offsets (X,Y)--	[D:0-5-12,0-2-8]
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LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.97	Vert(LL) -0.27	L-N	>999	360	MT20	244/190
(Roof Snow=20.0)	Lumber DOL 1.15	BC 0.89	Vert(CT) -0.49	L-N	>816	240		
TCDL 10.0	Rep Stress Incr YES	WB 0.85	Horz(CT) 0.07	J	n/a	n/a		
BCLL 10.0	Code IBC2018/TPI2014	Matrix-MS	Wind(LL) 0.18	N-P	>999	240		
BCDL 10.0							Weight: 207 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP 1650F 1.5E *Except* A-D: 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-2-0 max.); E-I.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except* C-P,E-L,H-L,I-K: 2x4 SP No.2	WEBS 1 Row at midpt I-J

REACTIONS. (size) J=0-3-8, B=0-3-8, Q=0-3-8
 Max Horz B=179(LC 11)
 Max Uplift J=-246(LC 8), B=-67(LC 8), Q=-340(LC 8)
 Max Grav J=1736(LC 33), B=326(LC 36), Q=1916(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-177/590, C-D=-2877/625, D-E=-2819/604, E-F=-3071/613, F-H=-3068/611,
 H-I=-2222/426, I-J=-1671/298
 BOT CHORD B-Q=-558/124, P-Q=-605/139, N-P=-529/2789, L-N=-434/2659, K-L=-316/2222
 WEBS C-P=-693/3466, D-P=-539/214, D-N=-552/139, E-N=0/441, E-L=-95/566, F-L=-713/204,
 H-L=-219/1024, H-K=-1240/297, I-K=-395/2583, C-Q=-1591/435

- NOTES-**
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 2-10-5, Interior(1) 2-10-5 to 14-0-0, Exterior(2R) 14-0-0 to 25-9-0, Interior(1) 25-9-0 to 36-5-7, Exterior(2E) 36-5-7 to 40-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - Provide adequate drainage to prevent water ponding.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 246 lb uplift at joint J, 67 lb uplift at joint B and 340 lb uplift at joint Q.
 - This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



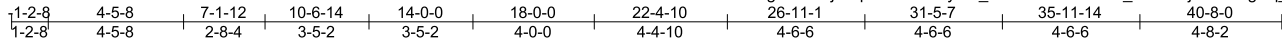
December 19, 2024

Job	Truss	Truss Type	Qty	Ply	170282517
250001	A9	Half Hip Girder	2	2	

Heartland Truss, Inc. Plattsburg, MO - 64477,

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Scale = 1:76.0

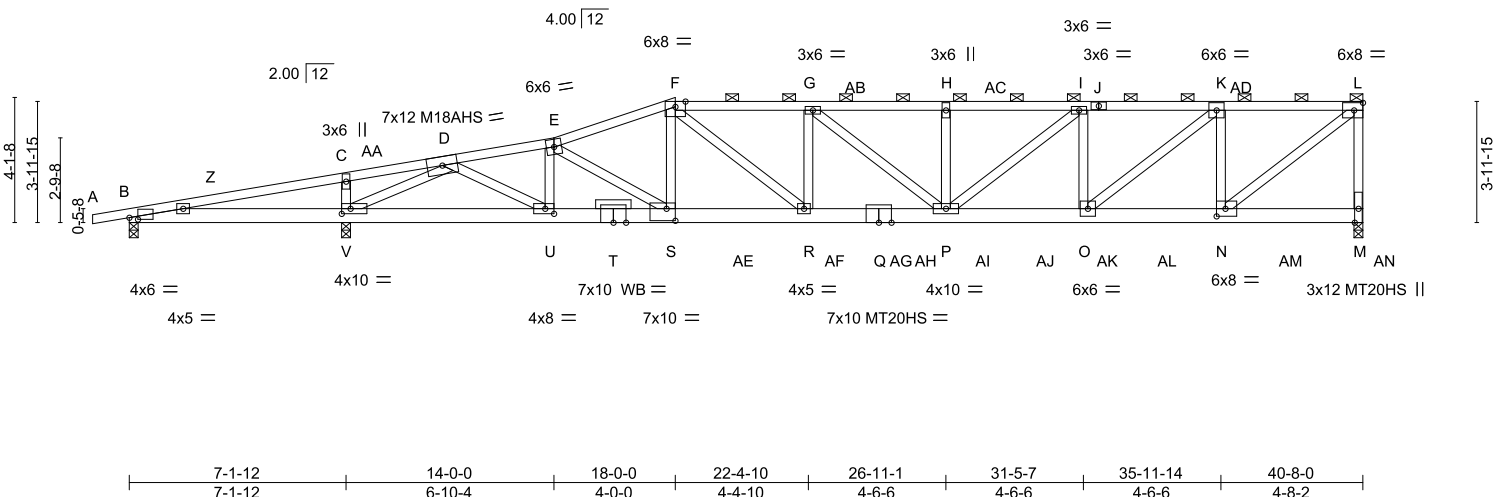


Plate Offsets (X,Y)--	[B:0-3-6,0-0-11], [N:0-3-8,0-3-0], [S:0-3-8,0-4-12], [U:0-3-8,0-2-0], [V:0-3-8,0-2-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.88	Vert(LL) -0.49 P-R >825 360	MT20 244/190	
(Roof Snow=20.0)	Lumber DOL 1.15	BC 0.53	Vert(CT) -0.76 P-R >524 240	MT20HS 187/143	
TCDL 10.0	Rep Stress Incr NO	WB 0.91	Horz(CT) 0.09 M n/a n/a	M18AHS 186/179	
BCLL 10.0	Code IBC2018/TPI2014	Matrix-MS	Wind(LL) 0.30 P-R >999 240	Weight: 500 lb	FT = 20%
BCDL 10.0					

LUMBER-	BRACING-
TOP CHORD 2x4 SP 1650F 1.5E *Except* J-L: 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-9-10 oc purlins, except end verticals, and 2-0-0 oc purlins (3-0-4 max.); F-L.
BOT CHORD 2x6 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
WEBS 2x4 SP No.3 *Except* D-V,D-U: 2x4 SP No.2, F-R,G-P,I-P,K-O,L-N: 2x4 SP 1650F 1.5E	6-0-0 oc bracing: B-V.
OTHERS 2x4 SP No.3	

REACTIONS. (size) M=0-3-8, B=0-3-8, V=0-3-8
 Max Horz B=148(LC 11)
 Max Uplift M=-1122(LC 8), B=-1055(LC 33), V=-1247(LC 8)
 Max Grav M=6486(LC 33), B=226(LC 11), V=6779(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-1121/6142, C-D=-1084/6102, D-E=-10338/1956, E-F=-12868/2416, F-G=-14300/2653,
 G-H=-13979/2545, H-I=-13979/2545, I-K=-11598/2100, K-L=-6993/1288, L-M=-5736/1025
 BOT CHORD B-V=-6033/1129, U-V=-888/4664, S-U=-1891/10403, R-S=-2167/12183, P-R=-2507/14296,
 O-P=-2008/11598, N-O=-1221/6993
 WEBS C-V=-566/170, D-V=-12076/2275, D-U=-1117/6412, E-U=-3468/702, E-S=-429/2194,
 F-S=-363/2264, F-R=-471/2756, G-R=-454/200, G-P=-648/153, H-P=-418/123,
 I-P=-569/3047, I-O=-2336/467, K-O=-1039/5892, K-N=-4124/770, L-N=-1544/8864

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x4 - 1 row at 0-7-0 oc.
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, Except member S-F 2x4 - 1 row at 0-5-0 oc.
 - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 2-10-5, Interior(1) 2-10-5 to 14-0-0, Exterior(2R) 14-0-0 to 23-9-0, Interior(1) 23-9-0 to 36-5-7, Exterior(2E) 36-5-7 to 40-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - Provide adequate drainage to prevent water ponding.
 - All plates are MT20 plates unless otherwise indicated.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1122 lb uplift at joint M, 1055 lb uplift at joint B, and 1247 lb uplift at joint V.



December 19, 2024

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Job 250001	Truss A9	Truss Type Half Hip Girder	Qty 2	Ply 2	Job Reference (optional) 170282517
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:20 2024 Page 2
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NOTES-

- 11) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 13) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.
- 14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 2625 lb down and 485 lb up at 18-0-0, 543 lb down and 110 lb up at 20-0-12, 543 lb down and 110 lb up at 22-0-12, 543 lb down and 110 lb up at 24-0-12, 543 lb down and 110 lb up at 26-0-12, 543 lb down and 110 lb up at 28-0-12, 543 lb down and 110 lb up at 30-0-12, 543 lb down and 110 lb up at 32-0-12, 543 lb down and 110 lb up at 34-0-12, 543 lb down and 110 lb up at 36-0-12, and 543 lb down and 110 lb up at 38-0-12, and 548 lb down and 105 lb up at 40-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: A-E=-60, E-F=-60, F-L=-60, M-W=-20

Concentrated Loads (lb)

Vert: S=-2625(B) N=-543(B) AE=-543(B) AF=-543(B) AG=-543(B) AH=-543(B) AI=-543(B) AJ=-543(B) AK=-543(B) AL=-543(B) AM=-543(B) AN=-548(B)

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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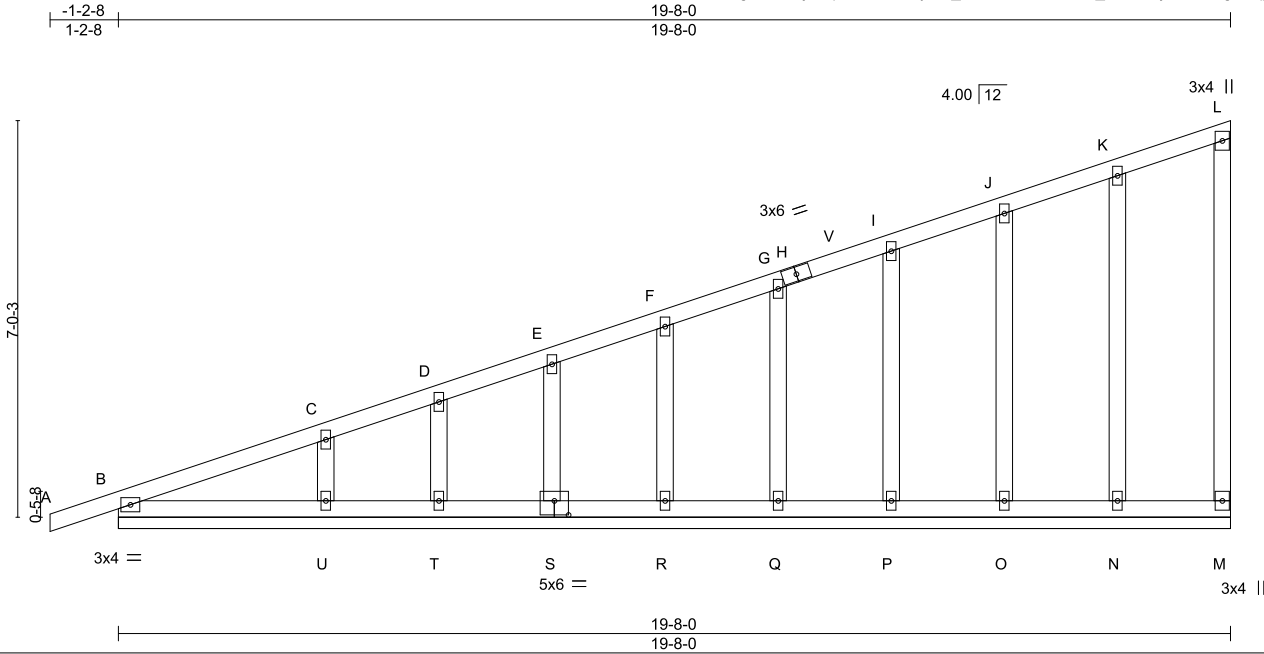
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job 250001	Truss B1	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	Job Reference (optional) 170282518
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Heartland Truss, Inc. Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:20 2024 Page 1

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LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES		GRIP	
TCLL	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	0.00	A	n/r	L/d	120	MT20	244/190
(Roof Snow=20.0)		Lumber DOL	1.15	BC	0.22	Vert(CT)	0.00	A	n/r		90		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	M	n/a	n/a			
BCLL	10.0	Code IBC2018/TPI2014		Matrix-S								Weight: 113 lb	FT = 20%
BCDL	10.0												

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.3		
OTHERS	2x4 SP No.3		

REACTIONS. All bearings 19-8-0.
 (lb) - Max Horz B=288(LC 9)
 Max Uplift All uplift 100 lb or less at joint(s) M, B, N, O, P, Q, R, S, T, U
 Max Grav All reactions 250 lb or less at joint(s) M, B, N, O, P, Q, R, S, T except U=297(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-2-8 to 1-9-8, Exterior(2N) 1-9-8 to 16-6-4, Corner(3E) 16-6-4 to 19-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - 3) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 4) Unbalanced snow loads have been considered for this design.
 - 5) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 6) All plates are 2x4 MT20 unless otherwise indicated.
 - 7) Gable requires continuous bottom chord bearing.
 - 8) Gable studs spaced at 2-0-0 oc.
 - 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) M, B, N, O, P, Q, R, S, T, U.
 - 11) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.



December 19, 2024

Job 250001	Truss B3	Truss Type Monopitch	Qty 8	Ply 1	170282520
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:21 2024 Page 1

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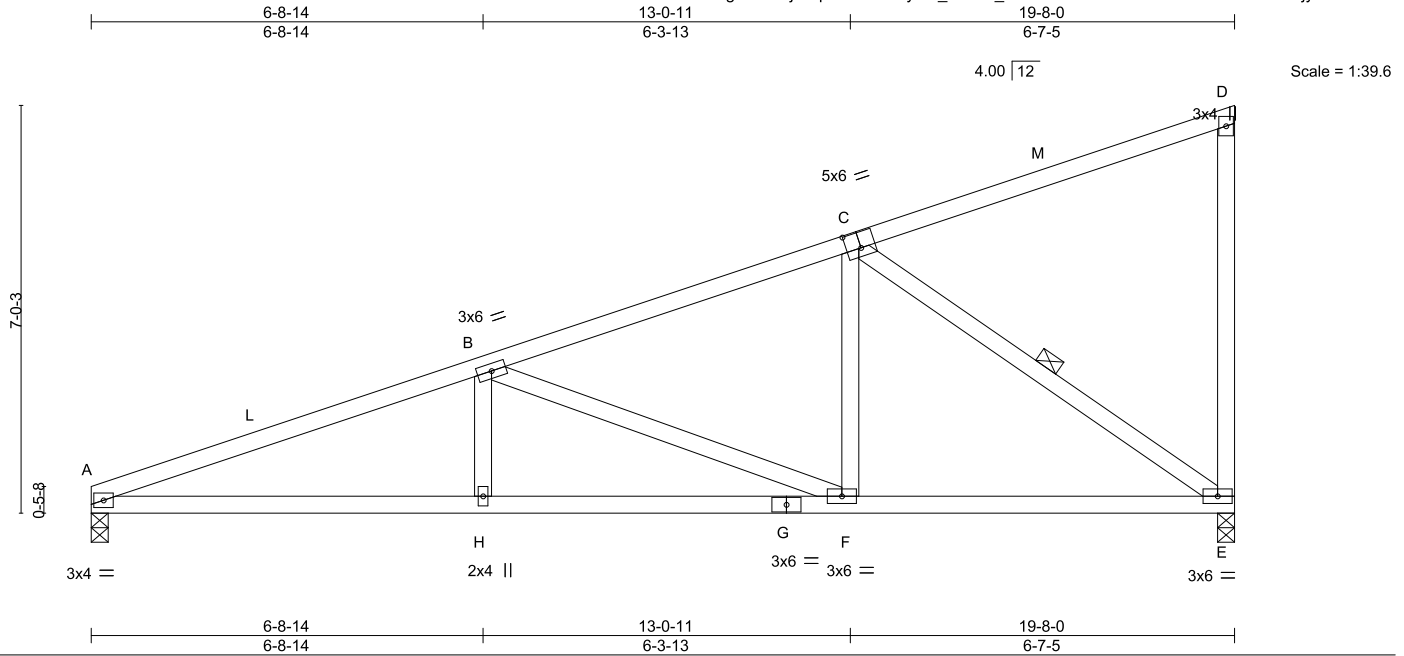


Plate Offsets (X,Y)-- [C:0-3-0,0-3-4]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.71 BC 0.67 WB 0.72	in (loc) l/def L/d Vert(LL) -0.08 H-K >999 360 Vert(CT) -0.16 H-K >999 240 Horz(CT) 0.04 E n/a n/a Wind(LL) 0.06 H-K >999 240	MT20	244/190
TCDL 10.0	Rep Stress Incr YES	Matrix-MS		Weight: 100 lb	FT = 20%
BCLL 10.0	Code IBC2018/TPI2014				
BCDL 10.0					

LUMBER-
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 3-10-0 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 WEBS 1 Row at midpt C-E

REACTIONS. (size) A=0-3-8, E=0-3-8
 Max Horz A=281(LC 11)
 Max Uplift A=-125(LC 8), E=-168(LC 12)
 Max Grav A=852(LC 3), E=945(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD A-B=-1827/301, B-C=-1036/207
 BOT CHORD A-H=-320/1688, F-H=-320/1688, E-F=-132/923
 WEBS B-H=0/253, B-F=-821/201, C-F=0/536, C-E=-1117/238

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 16-6-4, Exterior(2E) 16-6-4 to 19-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) A=125, E=168.
 - 6) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.



December 19, 2024

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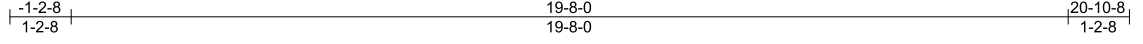
MiTek®
 16023 Swingley Ridge Rd.
 Chesterfield, MO 63017
 314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	170282521
250001	C1	MONOPITCH SUPPORTED	1	1	

Heartland Truss, Inc. Plattsburg, MO - 64477,

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Scale = 1:45.4

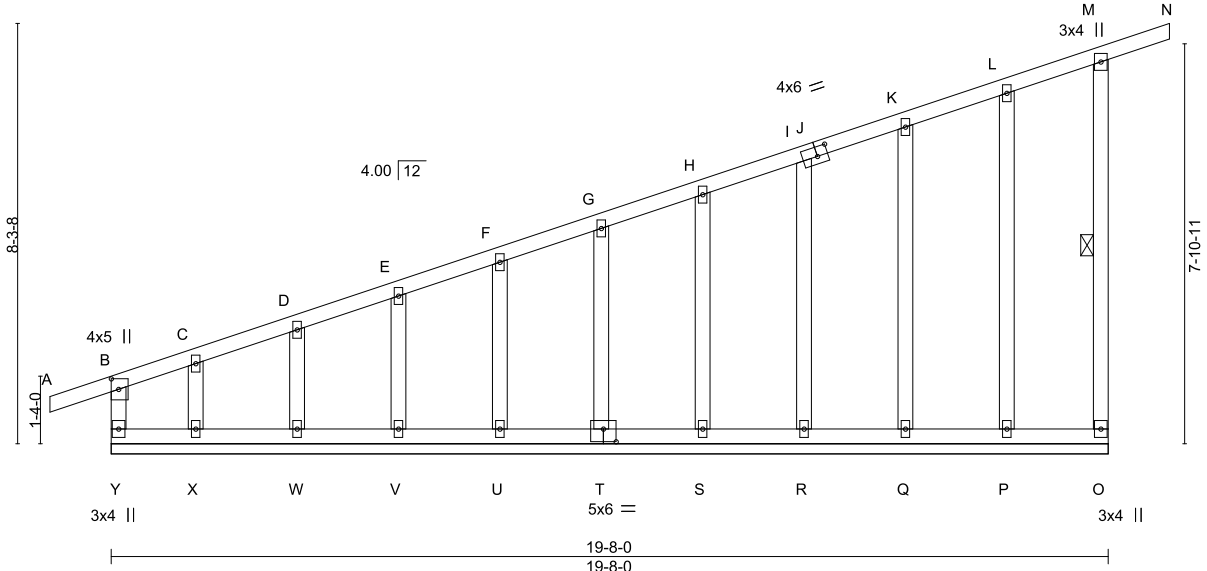


Plate Offsets (X,Y)-- [B:0-2-8,0-1-12], [J:0-2-8,0-2-4], [T:0-3-0,0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 1.00 BC 0.27 WB 0.15 Matrix-R	in (loc) l/def L/d Vert(LL) -0.00 M n/r 120 Vert(CT) -0.00 M n/r 90 Horz(CT) 0.00 O n/a n/a	MT20	244/190
TCDL 10.0	Rep Stress Incr YES				
BCLL 10.0	Code IBC2018/TPI2014				
BCDL 10.0				Weight: 130 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt M-O
OTHERS 2x4 SP No.3	

REACTIONS. All bearings 19-8-0.
 (lb) - Max Horz Y=341(LC 9)
 Max Uplift All uplift 100 lb or less at joint(s) O, P, Q, R, S, T, U, V, W except X=-275(LC 9)
 Max Grav All reactions 250 lb or less at joint(s) P, Q, R, S, T, U, V, W, X except Y=310(LC 23), O=252(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-297/272

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-2-8 to 1-8-0, Exterior(2N) 1-8-0 to 17-8-0, Corner(3E) 17-8-0 to 20-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - 3) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 4) Unbalanced snow loads have been considered for this design.
 - 5) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 6) All plates are 2x4 MT20 unless otherwise indicated.
 - 7) Gable requires continuous bottom chord bearing.
 - 8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
 - 9) Gable studs spaced at 2-0-0 oc.
 - 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) O, P, Q, R, S, T, U, V, W except (jt=lb) X=275.
 - 12) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.



December 19, 2024

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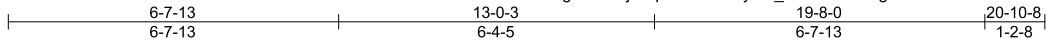


Job 250001	Truss C3	Truss Type MONOPICH	Qty 8	Ply 1	170282523
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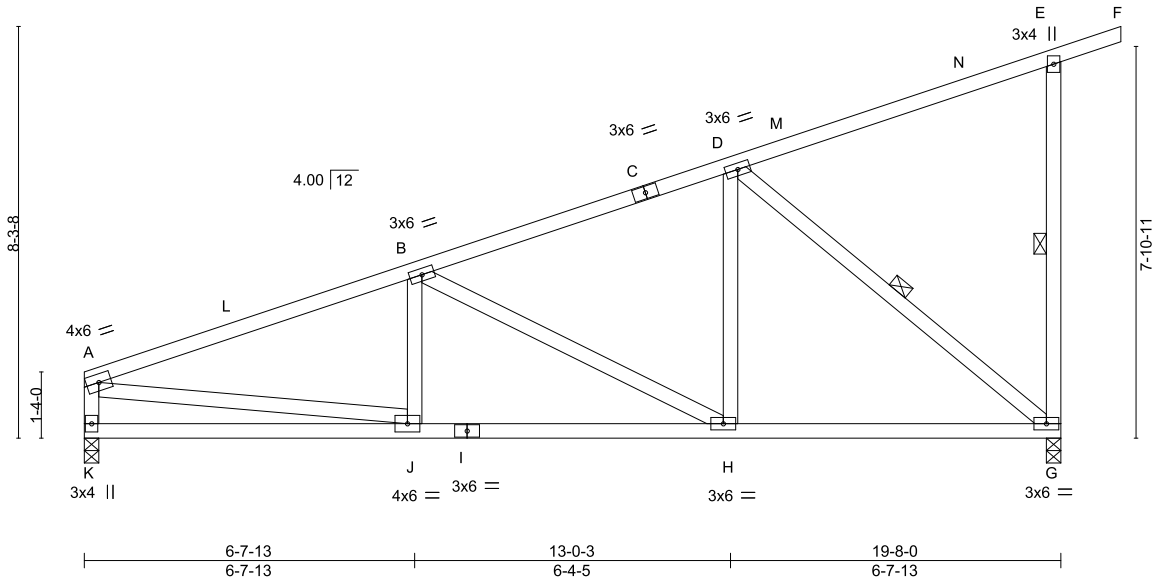
Heartland Truss, Inc, Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:23 2024 Page 1

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Scale = 1:46.4



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IBC2018/TPI2014	TC 0.88 BC 0.56 WB 0.50 Matrix-MS	in (loc) l/def L/d Vert(LL) -0.06 G-H >999 360 Vert(CT) -0.12 G-H >999 240 Horz(CT) 0.02 G n/a n/a Wind(LL) 0.03 J >999 240	MT20	244/190
TCDL 10.0				Weight: 118 lb	FT = 20%
BCLL 10.0					
BCDL 10.0					

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-3-12 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt E-G, D-G

REACTIONS. (size) G=0-3-8, K=0-3-8
 Max Horz K=331(LC 9)
 Max Uplift G=-208(LC 12), K=-112(LC 8)
 Max Grav G=1037(LC 19), K=836(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD A-B=-1319/196, B-D=-850/159, E-G=-387/151, A-K=-729/162
 BOT CHORD J-K=-320/415, H-J=-237/1205, G-H=-120/762
 WEBS B-H=-517/153, D-H=0/479, D-G=-969/218, A-J=-111/1055

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 17-10-8, Exterior(2E) 17-10-8 to 20-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) G=208, K=112.
 - 7) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.



December 19, 2024

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Job 250001	Truss D1	Truss Type Diagonal Hip Girder	Qty 2	Ply 1	170282524
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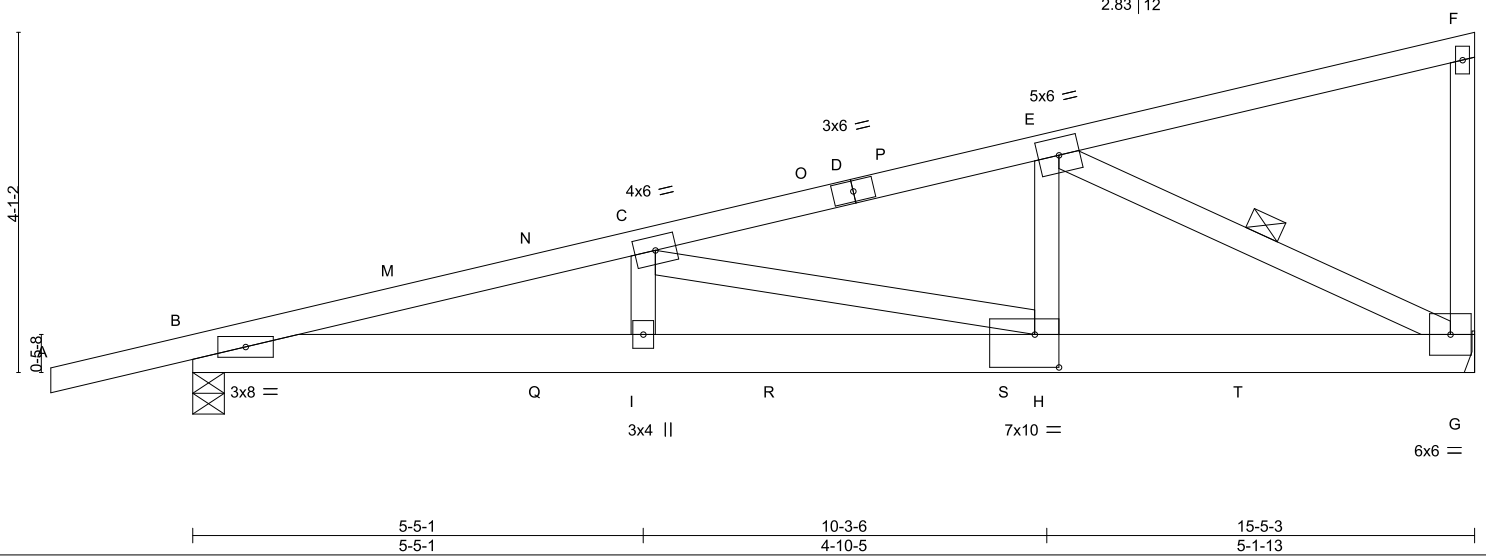
Heartland Truss, Inc, Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:23 2024 Page 1

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Scale = 1:27.7
2x4 II



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.58 BC 0.59 WB 0.85	in (loc) l/def L/d Vert(LL) -0.17 H-I >999 360 Vert(CT) -0.26 H-I >707 240 Horz(CT) 0.04 G n/a n/a Wind(LL) 0.11 H-I >999 240	MT20	244/190
TCDL 10.0	Rep Stress Incr NO	Matrix-MS		Weight: 87 lb	FT = 20%
BCLL 10.0	Code IBC2018/TPI2014				
BCDL 10.0					

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-6-7 oc purlins, except end verticals.
BOT CHORD 2x6 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 9-8-5 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt E-G

REACTIONS. (size) B=0-4-9, G=Mechanical
 Max Horz B=132(LC 11)
 Max Uplift B=-303(LC 8), G=-347(LC 12)
 Max Grav B=1418(LC 19), G=2114(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-4324/1148, C-E=-3283/844
 BOT CHORD B-I=-1125/4178, H-I=-1124/4189, G-H=-770/3165
 WEBS C-I=-0/309, C-H=-1064/367, E-H=-351/1837, E-G=-3486/930

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -1-8-8 to 2-6-7, Exterior(2R) 2-6-7 to 15-3-7 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 6) Refer to girder(s) for truss to truss connections.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) B=303, G=347.
 - 8) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 52 lb down and 70 lb up at 4-2-8, and 52 lb down and 70 lb up at 4-2-8 on top chord, and 9 lb down and 11 lb up at 4-2-8, 9 lb down and 11 lb up at 4-2-8, 218 lb down and 67 lb up at 7-0-7, 218 lb down and 67 lb up at 7-0-7, 334 lb down and 82 lb up at 9-10-6, 334 lb down and 82 lb up at 9-10-6, and 436 lb down and 100 lb up at 12-8-5, and 436 lb down and 100 lb up at 12-8-5 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
 - 10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: A-F=-60, G-J=-20



December 19, 2024

Continued on page 2

<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcsccomponents.com)</p>	<p>16023 Swingley Ridge Rd. Chesterfield, MO 63017 314.434.1200 / MiTek-US.com</p>
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Job 250001	Truss D1	Truss Type Diagonal Hip Girder	Qty 2	Ply 1	170282524 Job Reference (optional)
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:23 2024 Page 2
ID:rYBbgu44XWjWhpc7z8PG5uyI09_6IEOP5uLDgFNePiB9QmAXLnEsMLctGVGg3ilnby8?DA

LOAD CASE(S) Standard

Concentrated Loads (lb)

Vert: N=-26(F=-13, B=-13) Q=-16(F=-8, B=-8) R=-436(F=-218, B=-218) S=-667(F=-334, B=-334) T=-872(F=-436, B=-436)

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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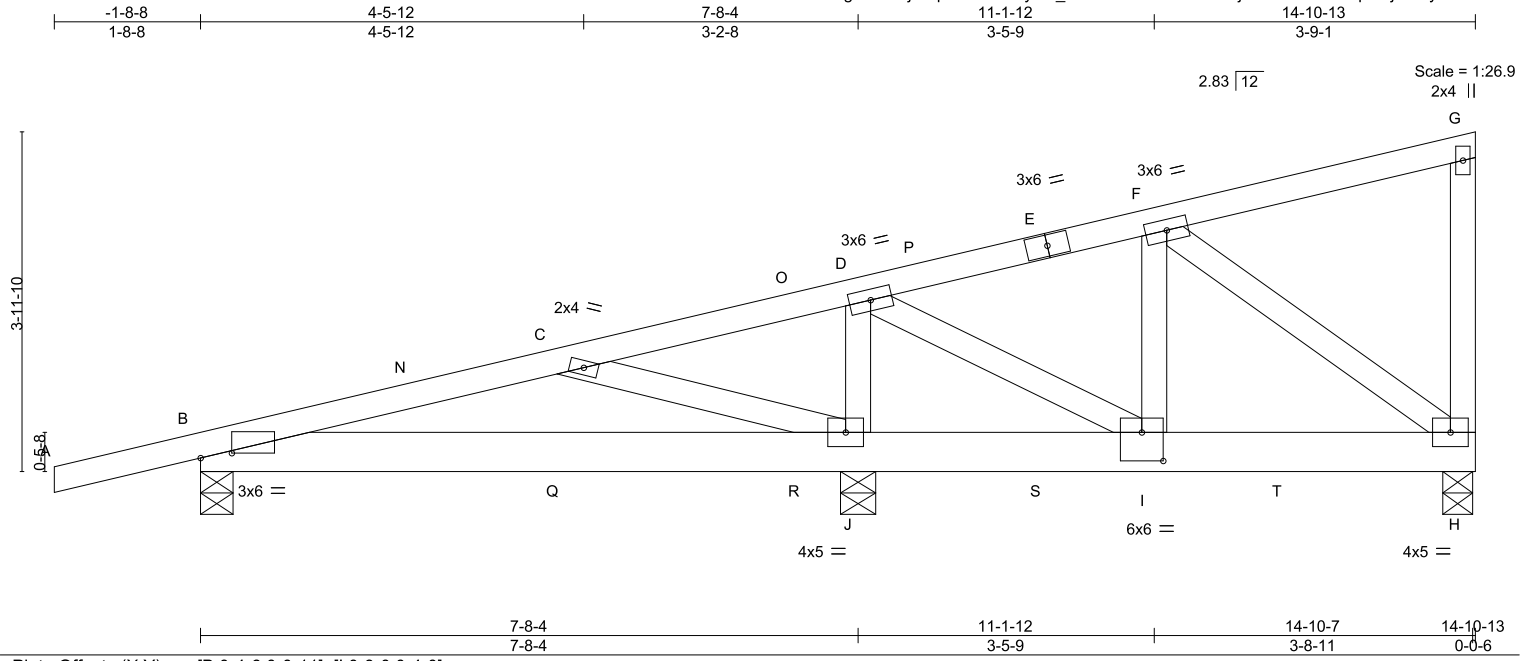
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Job 250001	Truss D1A	Truss Type Roof Special Girder	Qty 2	Ply 1	170282525
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:24 2024 Page 1
ID:rYBgu44XWjWhpc7z8PG5uyI09_aVomcQvzzzNDFZHNj8HP3ZJSlml6cq1PvJsrJ2y8?D9



LOADING (psf)	SPACING-	CSI.	DEFL.		PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.37 BC 0.38 WB 0.45	in (loc) l/defl L/d Vert(LL) -0.02 J-M >999 360 Vert(CT) -0.04 J-M >999 240 Horz(CT) 0.00 H n/a n/a Wind(LL) 0.01 H-I >999 240		MT20	244/190
TCDL 10.0	Rep Stress Incr NO	Matrix-MS			Weight: 87 lb	FT = 20%
BCLL 10.0	Code IBC2018/TPI2014					
BCDL 10.0						

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3	

REACTIONS. (size) B=0-4-9, J=0-4-15, H=0-4-3
 Max Horz B=129(LC 11)
 Max Uplift B=-112(LC 8), J=-434(LC 12), H=-160(LC 14)
 Max Grav B=366(LC 19), J=2070(LC 19), H=889(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-281/121, D-F=-817/250
 BOT CHORD B-J=-133/264, H-I=-169/763
 WEBS C-J=-477/264, D-J=-1014/408, D-I=-329/1081, F-I=-202/503, F-H=-929/294


- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -1-8-8 to 2-6-7, Exterior(2R) 2-6-7 to 14-9-1 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) B=112, J=434, H=160.
 - 7) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - 8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 52 lb down and 71 lb up at 4-2-8, and 52 lb down and 71 lb up at 4-2-8 on top chord, and 9 lb down and 11 lb up at 4-2-8, 9 lb down and 11 lb up at 4-2-8, 218 lb down and 67 lb up at 7-0-7, 218 lb down and 67 lb up at 7-0-7, 497 lb down and 176 lb up at 9-10-6, 334 lb down and 82 lb up at 9-10-6, and 109 lb down and 51 lb up at 12-8-5, and 436 lb down and 100 lb up at 12-8-5 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
 - 9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (plf)
 Vert: A-G=-60, H-K=-20



December 19, 2024

Continued on page 2

<p>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.</p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcsccomponents.com)</p>	 <p>16023 Swingley Ridge Rd. Chesterfield, MO 63017 314.434.1200 / MiTek-US.com</p>
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Job 250001	Truss D1A	Truss Type Roof Special Girder	Qty 2	Ply 1	170282525 Job Reference (optional)
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:24 2024 Page 2
ID:rYBgu44XWjWhpc7z8PG5uyI09_aVomcQvzzzNDFZHNj8HP3ZJSImI6cq1PvJrJ2y8?D9

LOAD CASE(S) Standard

Concentrated Loads (lb)

Vert: C=-26(F=-13, B=-13) Q=-16(F=-8, B=-8) R=-436(F=-218, B=-218) S=-830(F=-334, B=-497) T=-546(F=-436, B=-109)

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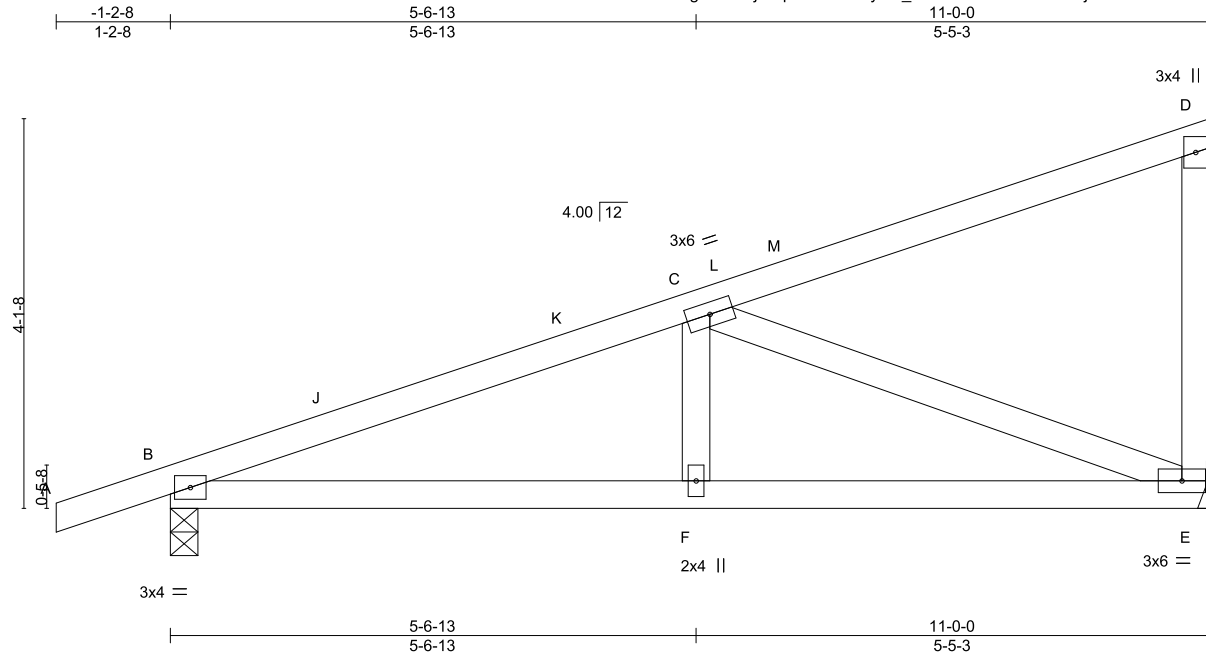
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Job 250001	Truss E	Truss Type Jack-Closed	Qty 24	Ply 1	170282526
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Heartland Truss, Inc., Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:24 2024 Page 1

ID:rYBgu44XWjWhpc7z8PG5uyI09_aVomcQvzzzNDFZHNj8HP3ZJQGmIBcoVPvjSrJ2y8?D9



Scale = 1:24.4

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	2-0-0 Plate Grip DOL 1.15	TC 0.47	Vert(LL) -0.03	E-F	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.38	Vert(CT) -0.06	E-F	>999	240		
BCLL 10.0	Rep Stress Incr YES	WB 0.55	Horz(CT) 0.01	E	n/a	n/a		
BCDL 10.0	Code IBC2018/TPI2014	Matrix-MS	Wind(LL) 0.02	F-I	>999	240		
							Weight: 51 lb	FT = 20%

LUMBER-
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 5-11-8 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) B=0-3-8, E=Mechanical
 Max Horz B=166(LC 11)
 Max Uplift B=-120(LC 8), E=-90(LC 8)
 Max Grav B=568(LC 3), E=563(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-932/214
 BOT CHORD B-F=-189/849, E-F=-189/849
 WEBS C-E=-881/271

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 6-7-5, Exterior(2R) 6-7-5 to 10-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) E except (jt=lb) B=120.
- 8) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.



December 19, 2024

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Job 250001	Truss E1	Truss Type Jack-Closed	Qty 6	Ply 1	170282527
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Heartland Truss, Inc, Plattsburg, MO - 64477,

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ID:rYBbgu44XWjWhpc7z8PG5uyI09._2hM8qmwkbkHW4tisaGrpecmsaeA?WLPJPZ7NBPrUy8?D8

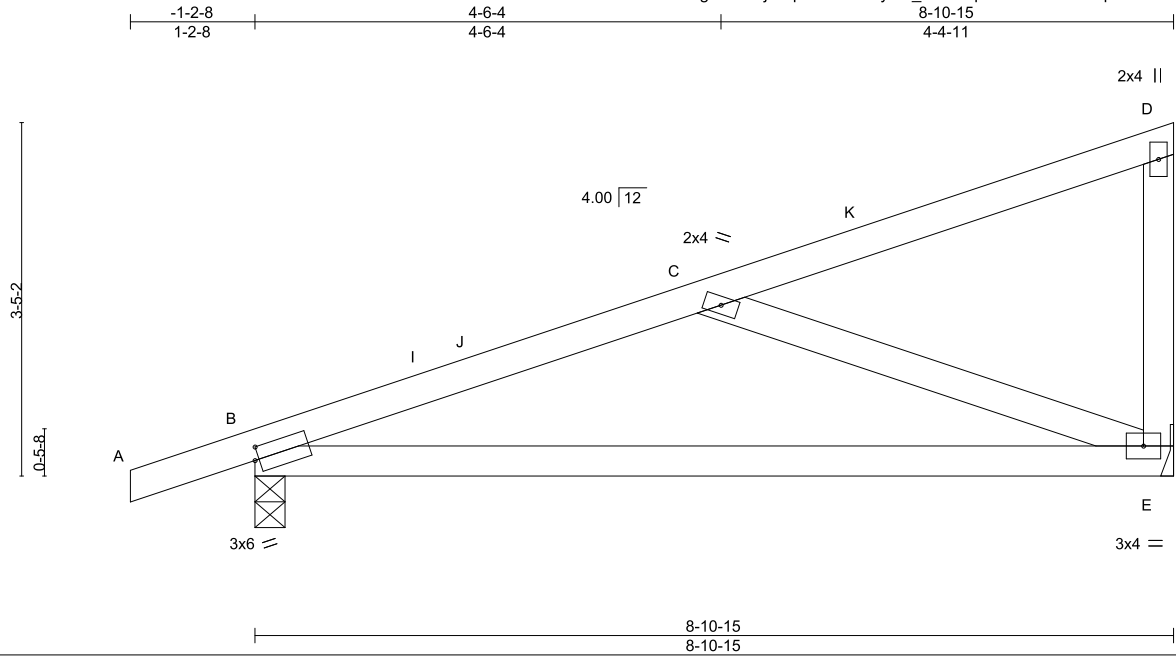


Plate Offsets (X,Y)-- [B:0-0-8,0-1-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/def	L/d	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	Plate Grip DOL 1.15	TC 0.56	Vert(LL) -0.18	E-H	>587	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.75	Vert(CT) -0.36	E-H	>292	240		
BCLL 10.0	Rep Stress Incr YES	WB 0.31	Horz(CT) 0.01	B	n/a	n/a		
BCDL 10.0	Code IBC2018/TPI2014	Matrix-MP	Wind(LL) 0.01	E-H	>999	240		
							Weight: 40 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) B=0-3-8, E=Mechanical
Max Horz B=137(LC 11)
Max Uplift B=-107(LC 8), E=-72(LC 8)
Max Grav B=499(LC 19), E=464(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD B-C=-722/281
BOT CHORD B-E=-266/671
WEBS C-E=-712/347

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 4-3-8, Exterior(2R) 4-3-8 to 8-9-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 6) Refer to girder(s) for truss to truss connections.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) E except (jt=lb) B=107.
 - 8) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.



December 19, 2024

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Job 250001	Truss E1A	Truss Type Jack-Closed	Qty 2	Ply 1	170282528
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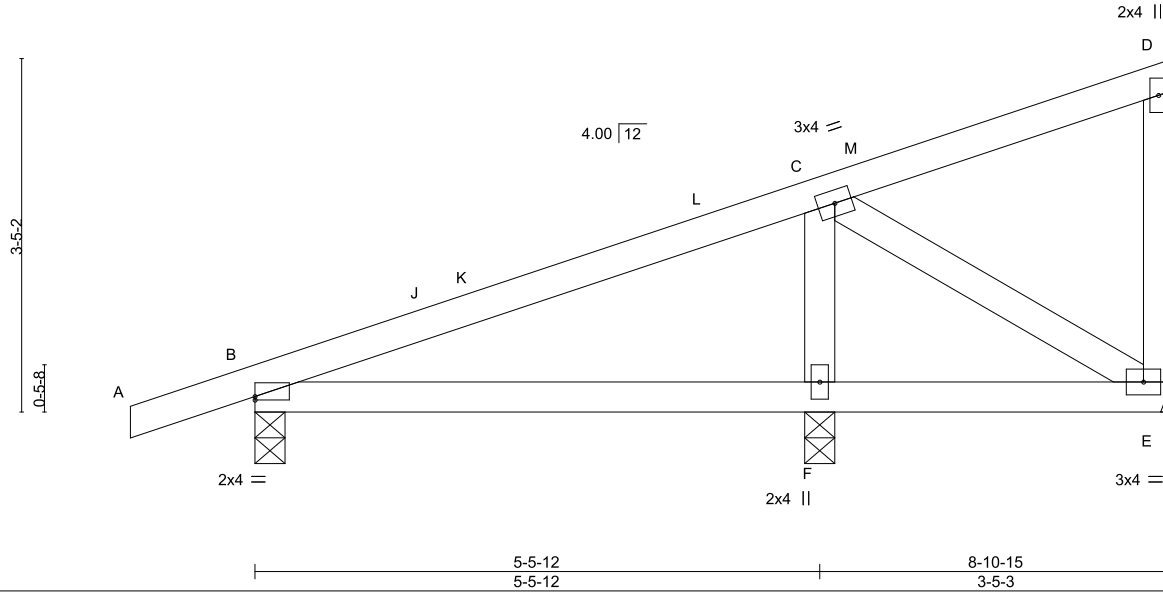
Heartland Truss, Inc, Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:25 2024 Page 1

ID:rYBbgu44XWjWhpc7z8PG5uyI09_-2hM8qmwbkHW4tisaGrpecm9A6gLM7Z7NBPrUy8?D8



Scale = 1:22.4



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	Plate Grip DOL	1.15	TC 0.40	Vert(LL)	-0.03	F-I	>999	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.30	Vert(CT)	-0.06	F-I	>999		
BCLL 10.0	Rep Stress Incr	YES	WB 0.07	Horz(CT)	0.01	B	n/a		
BCDL 10.0	Code IBC2018/TPI2014		Matrix-MP	Wind(LL)	0.02	F-I	>999	Weight: 41 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	

REACTIONS. (size) B=0-3-8, F=0-3-8, E=Mechanical
 Max Horz B=137(LC 11)
 Max Uplift B=-91(LC 8), F=-43(LC 8), E=-45(LC 8)
 Max Grav B=350(LC 19), F=396(LC 19), E=217(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-257/49
 WEBS C-F=-261/171

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 4-6-4, Exterior(2R) 4-6-4 to 8-9-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 6) Refer to girder(s) for truss to truss connections.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) B, F, E.
 - 8) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.



December 19, 2024

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Job 250001	Truss E2	Truss Type Jack-Closed	Qty 6	Ply 1	170282529
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:25 2024 Page 1

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Scale = 1:17.4

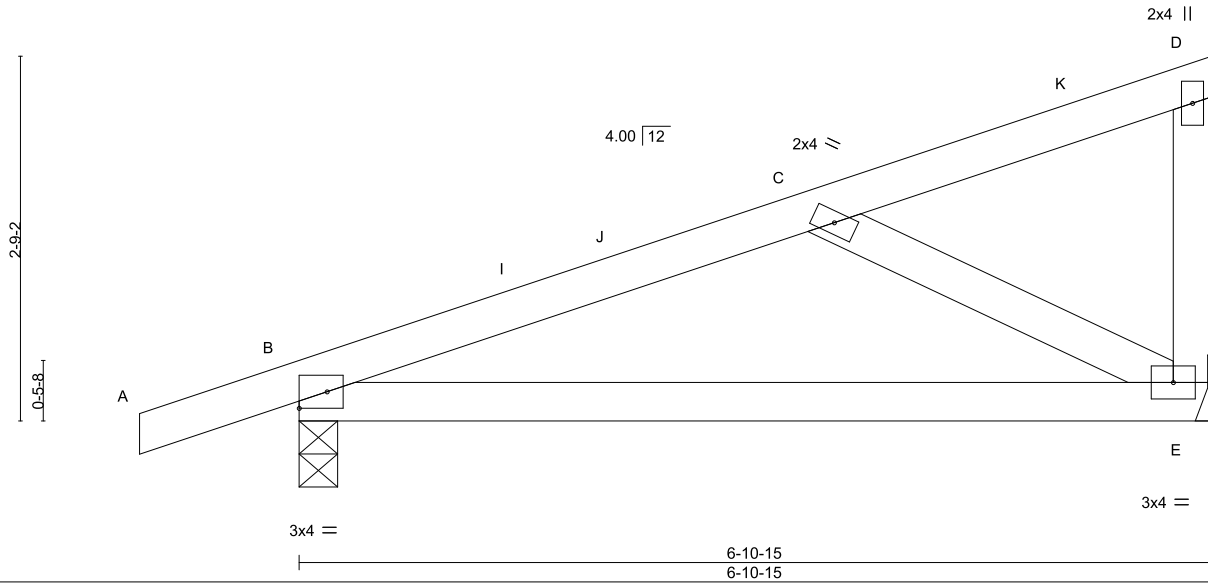


Plate Offsets (X,Y)-- [B:Edge,0-1-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.31 BC 0.46 WB 0.13 Matrix-MP	in (loc) l/defl L/d Vert(LL) -0.06 E-H >999 360 Vert(CT) -0.13 E-H >627 240 Horz(CT) 0.01 B n/a n/a Wind(LL) -0.01 E-H >999 240	MT20	244/190
TCDL 10.0	Rep Stress Incr YES			Weight: 31 lb	FT = 20%
BCLL 10.0	Code IBC2018/TPI2014				
BCDL 10.0					

LUMBER-
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) B=0-3-8, E=Mechanical
 Max Horz B=109(LC 11)
 Max Uplift B=-95(LC 8), E=-54(LC 8)
 Max Grav B=436(LC 19), E=362(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-484/215
 BOT CHORD B-E=-209/434
 WEBS C-E=-485/287

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 2-6-4, Exterior(2R) 2-6-4 to 6-9-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 6) Refer to girder(s) for truss to truss connections.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) B, E.
 - 8) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.



December 19, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

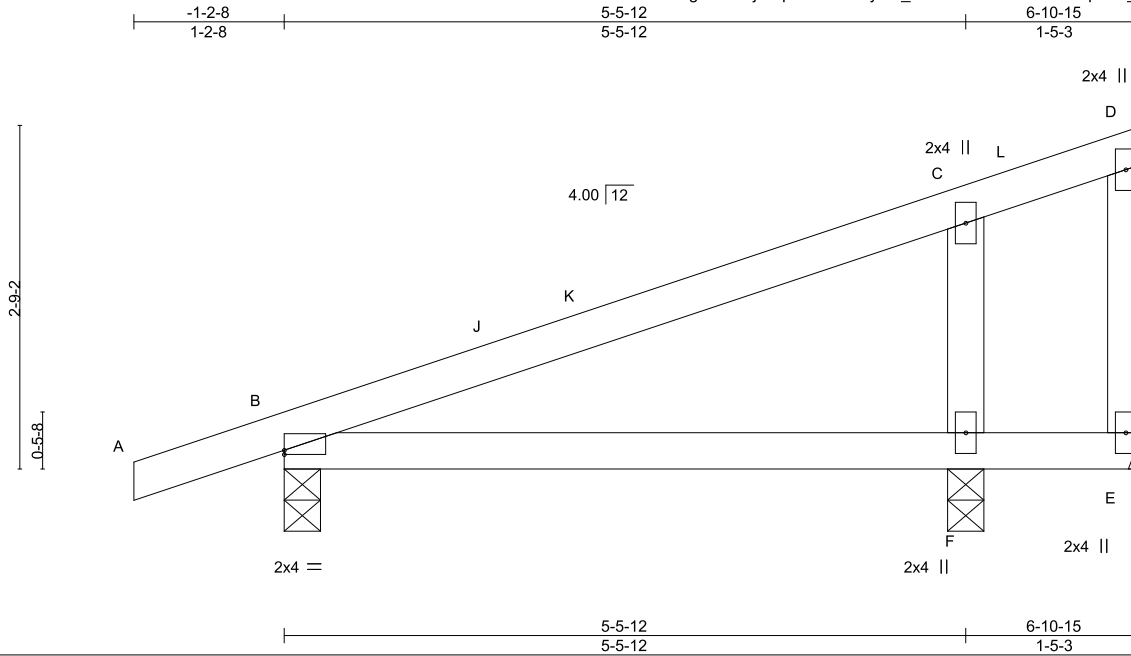


Job 250001	Truss E2A	Truss Type Jack-Closed	Qty 2	Ply 1	Job Reference (optional) 170282530
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Heartland Truss, Inc. Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:26 2024 Page 1

ID:rYBbgu44XWjWhpc7z8PG5uyI09_-WtwX16xDVbexVsRmqZKt8_PmvZSp4pgiM1xyOwy8?D7



Scale = 1:18.5

Plate Offsets (X,Y)-- [B:0-0-0,0-0-6]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	Plate Grip DOL 1.15	TC 0.46	Vert(LL) -0.04	F-I	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.30	Vert(CT) -0.06	F-I	>999	240		
BCLL 10.0	Rep Stress Incr YES	WB 0.12	Horz(CT) 0.01	B	n/a	n/a		
BCDL 10.0	Code IBC2018/TPI2014	Matrix-MP	Wind(LL) 0.02	F-I	>999	240		
							Weight: 29 lb	FT = 20%

LUMBER-
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) E=Mechanical, B=0-3-8, F=0-3-8
 Max Horz B=109(LC 11)
 Max Uplift E=-173(LC 19), B=-74(LC 8), F=-114(LC 12)
 Max Grav E=44(LC 12), B=310(LC 19), F=661(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 WEBS C-F=-475/329

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 2-6-4, Exterior(2R) 2-6-4 to 6-9-3 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 6) Refer to girder(s) for truss to truss connections.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) B except (jt=B) E=173, F=114.
 - 8) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.



December 19, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

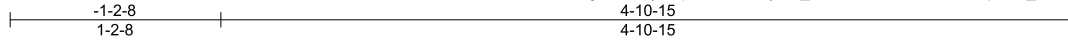
MiTek®
 16023 Swingley Ridge Rd.
 Chesterfield, MO 63017
 314.434.1200 / MiTek-US.com

Job 250001	Truss E3	Truss Type Jack-Closed	Qty 8	Ply 1	170282531
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Heartland Truss, Inc. Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:26 2024 Page 1

ID:rYBbgu44XWjWWhpc7z8PG5uyI09_-WtwX16xDVbexVsRmqZKt8_PmvZRu4qViM1xyOwy8?D7



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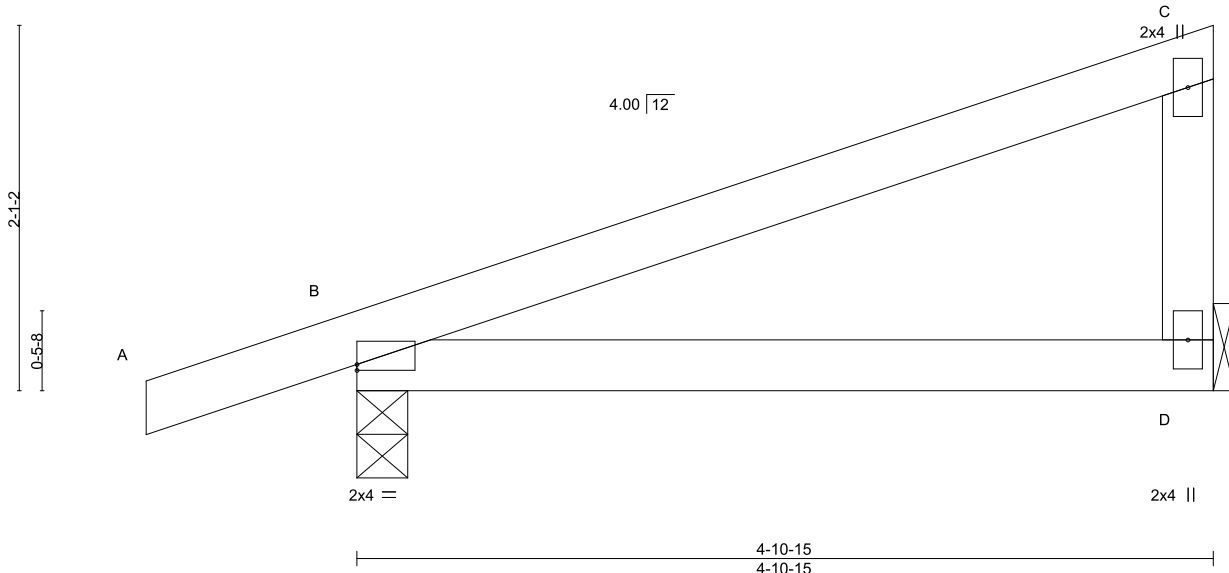


Plate Offsets (X, Y)-- [B:0-0-0,0-0-6]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	Plate Grip DOL 1.15		TC 0.46	Vert(LL) -0.04	D-G	>999	360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15		BC 0.32	Vert(CT) -0.07	D-G	>845	240		
BCLL 10.0	Rep Stress Incr YES		WB 0.00	Horz(CT) 0.01	B	n/a	n/a		
BCDL 10.0	Code IBC2018/TPI2014		Matrix-MP	Wind(LL) 0.02	D-G	>999	240	Weight: 19 lb	FT = 20%

LUMBER-
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 4-10-15 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) D=Mechanical, B=0-3-8
 Max Horz B=80(LC 11)
 Max Uplift D=-38(LC 12), B=-84(LC 8)
 Max Grav D=246(LC 19), B=381(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCCL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCCL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) D, B.
- 8) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.



December 19, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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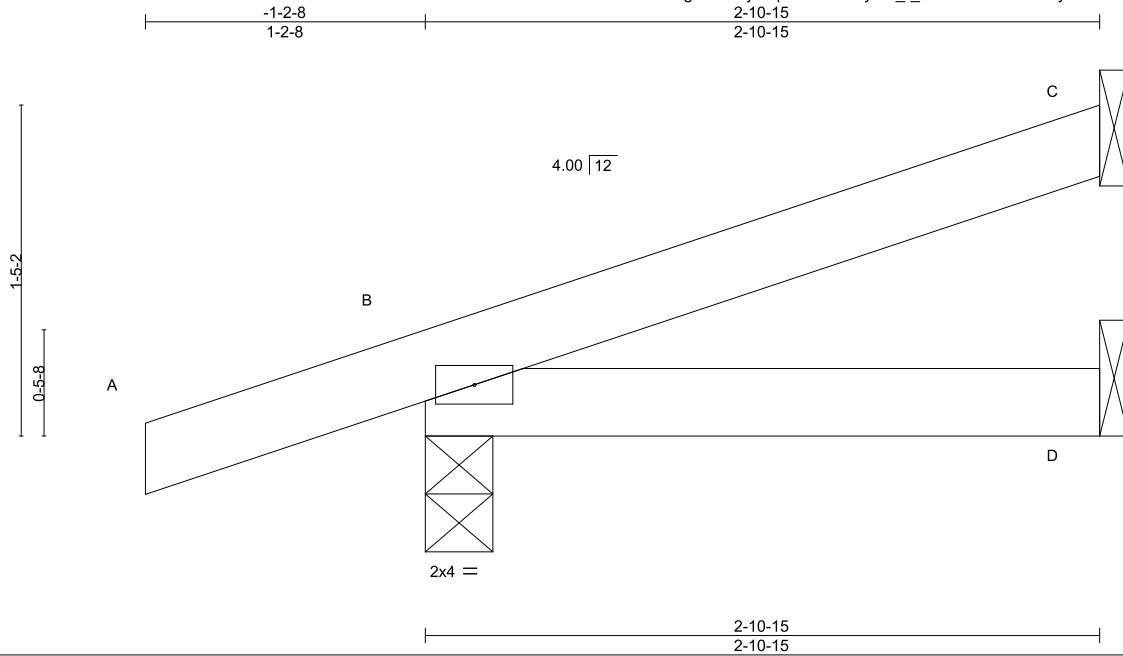
16023 Swingley Ridge Rd.
 Chesterfield, MO 63017
 314.434.1200 / MiTek-US.com

Job 250001	Truss E4	Truss Type Jack-Open	Qty 8	Ply 1	170282532
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Heartland Truss, Inc. Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:27 2024 Page 1

ID:rYBbgu44XWjWhpc7z8PG5uyI09_ _4TvESxrGumo600yOGr6hBx0LzqQpHlsbhgVwNy8?D6



Scale = 1:9.9

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.16 BC 0.09 WB 0.00 Matrix-MP	in (loc) l/defl L/d Vert(LL) -0.00 D-G >999 360 Vert(CT) -0.01 D-G >999 240 Horz(CT) 0.00 C n/a n/a Wind(LL) -0.00 D-G >999 240	MT20	244/190
TCDL 10.0	Rep Stress Incr YES				
BCLL 10.0	Code IBC2018/TPI2014			Weight: 11 lb	FT = 20%
BCDL 10.0					

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-10-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) C=Mechanical, B=0-3-8, D=Mechanical
Max Horz B=58(LC 8)
Max Uplift C=-32(LC 12), B=-72(LC 8)
Max Grav C=95(LC 19), B=278(LC 19), D=50(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) C, B.
- 8) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.



December 19, 2024

Job 250001	Truss EA	Truss Type Monopitch	Qty 6	Ply 1	170282533
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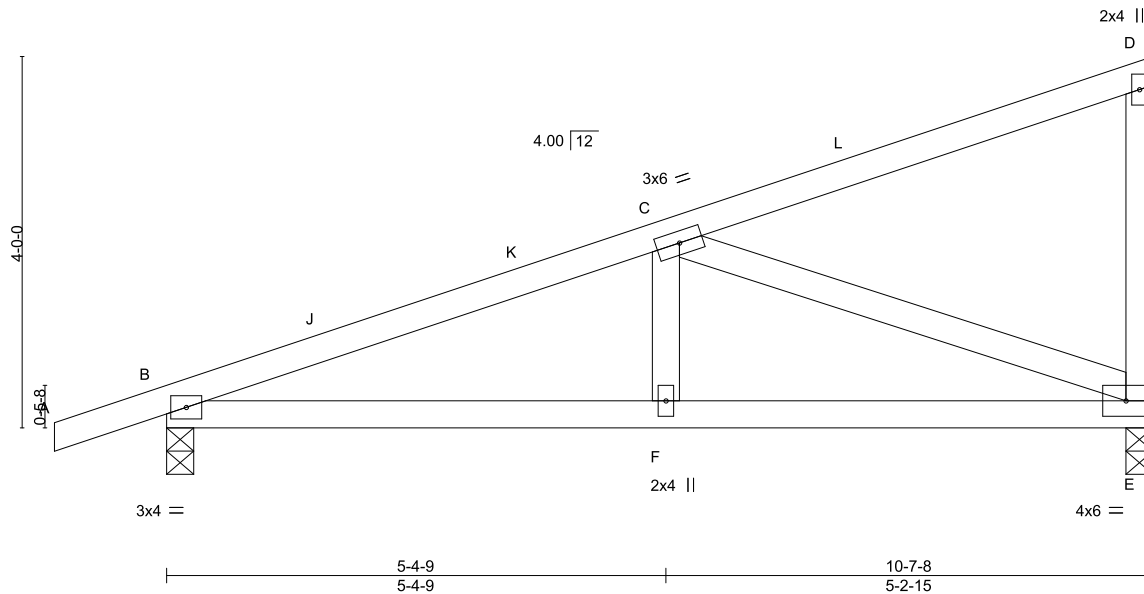
Heartland Truss, Inc, Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:27 2024 Page 1

ID:rYBbgu44XWjWhpc7z8PG5uyI09_-4TvESxrGumo600yOGr6hBxy2zmDpABsbhgVwNy8?D6



Scale = 1:24.8



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.43 BC 0.35 WB 0.48 Matrix-MS	Vert(LL) -0.03 Vert(CT) -0.05 Horz(CT) 0.01 Wind(LL) 0.02	E-F E-F E F-I	>999 >999 n/a >999	360 240 n/a 240	MT20	244/190
TCDL 10.0	Rep Stress Incr YES						Weight: 50 lb	FT = 20%
BCLL 10.0	Code IBC2018/TPI2014							
BCDL 10.0								

LUMBER-
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3

BRACING-
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) E=0-3-8, B=0-3-8
 Max Horz B=161(LC 11)
 Max Uplift E=-89(LC 12), B=-118(LC 8)
 Max Grav E=545(LC 19), B=555(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-902/219
 BOT CHORD B-F=-183/820, E-F=-183/820
 WEBS C-E=-852/267

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-2-8 to 1-9-8, Interior(1) 1-9-8 to 7-5-12, Exterior(2E) 7-5-12 to 10-5-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 3) Unbalanced snow loads have been considered for this design.
 - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) E except (jt=lb) B=118.
 - 7) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.



December 19, 2024

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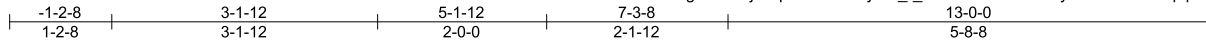
16023 Swingley Ridge Rd.
 Chesterfield, MO 63017
 314.434.1200 / MiTek-US.com

Job 250001	Truss F1	Truss Type Monopitch Supported Gable	Qty 2	Ply 1	170282534
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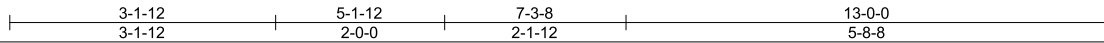
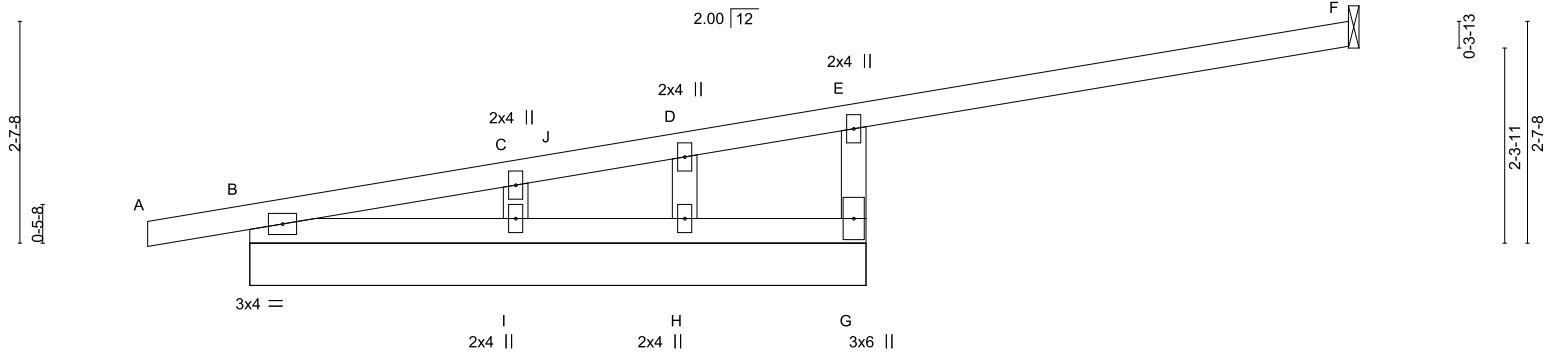
Heartland Truss, Inc, Plattsburg, MO - 64477,

8.730 s Dec 5 2024 MiTek Industries, Inc. Tue Dec 17 17:05:27 2024 Page 1

ID:rYBbgu44XWjWhpc7z8PG5uyI09_-4TvESxrGumo600yOGr6hBxvUzqapGksbhgVwNy8?D6



Scale = 1:27.3



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IBC2018/TPI2014	TC 0.60 BC 0.08 WB 0.09 Matrix-P	Vert(LL) -0.00 Vert(CT) -0.01 Horz(CT) -0.00 Wind(LL) 0.00	B-I B-I F H	>999 >999 n/a ****	360 240 n/a 240	MT20	244/190
TCDL 10.0							Weight: 36 lb	FT = 20%
BCLL 10.0								
BCDL 10.0								

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 7-3-8 except (jt=length) F=Mechanical.
(lb) - Max Horz B=77(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) F, B, I except G=-166(LC 12)
Max Grav All reactions 250 lb or less at joint(s) F, B, H except G=528(LC 19), I=287(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD E-G=-510/492
WEBS C-I=-214/254

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-2-8 to 1-9-8, Exterior(2N) 1-9-8 to 12-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - 3) TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
 - 4) Unbalanced snow loads have been considered for this design.
 - 5) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
 - 6) Gable studs spaced at 2-0-0 oc.
 - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 8) Refer to girder(s) for truss to truss connections.
 - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) F, B, I except (jt=lb) G=166.
 - 10) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.



December 19, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

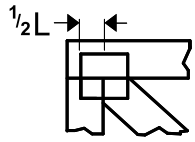
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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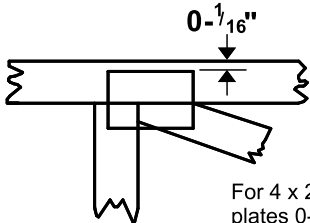
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.



This symbol indicates the required direction of slots in connector plates.

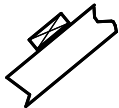
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

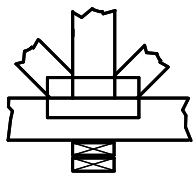
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

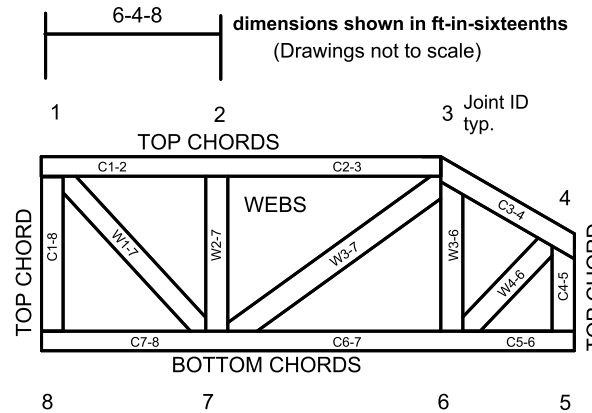


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

- ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
- DSB-22: Design Standard for Bracing.
- BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

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MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.